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DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

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CALENDAR FOR JULY.

The fields are all alive with sultry noise
Of labor's sounds and insects' busy joys;
The reapers o'er their glittering sickles stoop;

* * * * * *

Some o'er the rustling scythes go bending on;
And shockers follow where their toils have gone,
Heaping the swaths that rustle in the sun.

CLARE'S *Shepherd's Calendar*

JULY has come, and the whole world of wealth is spread out before us in prodigal array.—What a sense of fulness everything about us has. The old house on the hillside, that has stood out as blank and bald as a flag-staff for six months past, is now hidden from view, or its gable can only be seen through a profusion of trembling foliage. —"The woods and groves have darkened and thickened into one impervious mass of sober uniform green, and having for a while ceased to exercise the more active functions of the spring, are resting from their labors. * * * In winter, the trees may be supposed to sleep in a state of insensible inactivity, and in spring to be laboring with the flood of new life that is pressing through their veins, and forcing them to perform the offices attached to their existence. But in summer, having reached the middle term of their annual life, they pause in their appointed course, and then, if ever, *taste* the nourishment they take in, and 'enjoy the air they breathe.' And he, who, sitting in summer time beneath the shade of a spreading tree, can see its bare branches fan the soft breeze as it passes, and hear its polished leaves whisper and twitter to each other, like birds at love-making; and yet can feel anything like an assurance that it does *not* enjoy its existence, know little of the tenure by which he holds his own, and still less of that by which he clings to the hope of a future. I do not ask him to make it an article of his *faith* that the flowers feel; but I do ask him, for his own sake, not to make it an article of his faith that they *do not*."

Nothing can be more grateful to the mind than this flush of animated existence—these promises of future crops! How attractive and delightful are the changing hues of the grain-fields. The rye is turning yellow, indicating that its time of ripening is at hand. The wheat and barley are of a dull green, while the oats are whitening, and all are gracefully bending to the summer breeze as it passes over them. "What can be more beautiful to look on, from an eminence, than a great plain, painted all over with the party-colored honors of the early portion of this month, when the all-pervading verdure of the spring has passed away, and before the scorching heats of summer have had time to prevail over the various tints and hues that have taken place."

How stately the trees stand on the lawn or road-side, and how lovingly they have intermingled their branches in the forest, and ever sing in harmony that "the Hand that made them is Divine." The influence of these trees on man is neither small nor unimportant, for without them our climate would probably undergo an entire change. They furnish the soil with that unorganized matter on which alone perfect plants can live, by the decay of leaves, and ultimately by the decay of trunks and branches. So the waters of a country, the rivers and lakes, are necessarily affected by the state of the woods of that

country. These woods must, in all cases, act more or less as a sponge in retaining the water which falls on them; and water must thus be supplied more gradually to the rivers, in countries covered with wood, than in countries which are cleared. The influence of forest scenery in increasing the moisture of the atmosphere, and in preventing a climate from being so hot in summer and so cold in winter, as it would otherwise be, is now well understood. Trees modify both the temperature and moisture of the atmosphere; they are all-important as *shelter*, by checking the force of the wind, as well as being condensers of asmospheric vapor, and affording both man and beast a grateful shade from the scorching rays of the sun.

If trees were taken from the streets, lanes and yards our of New England villages, what equivalent could be introduced to supply their places as objects of usefulness and beauty? What art of man could devise a substitute! What, to meet the scanning eye, or watchful ear! How utterly poor and powerless would all our attainments prove to supply this defect! What traveller, seeking recreation and rest, would take his family to a treeless village! Our people are now appreciating the value of trees, and their influence upon both mind and matter. From some eminence our villages have the appearance of a forest. The smoke curls up from among waving branches, and the church spire looks out from among green leaves, while the tones of the church bell, so familiar to every New England ear, roll away to the hillsides, mellowed and subdued by the blossoms and foliage of our village trees. Bonaparte was once walking upon the terrace at Malmaison, and was deeply affected by hearing the evening bells of Ruel. "If such is their effect upon me," he said, "what must it be with others?"

What son of a New England village ever wandered into the wide world, and forgot his New England church, and minister, and village trees! Some, alas, may have forgotten them for a time, but the impression of them made in youth, can rarely be effaced from the mind. The kind and earnest words of a faithful teacher to the young heart, will bear him in remembrance in all after life, whether in the quiet seclusion of life, or on burning sands, or stormy seas. Thousands in these villages will say with the estimable FULLER, "Our minister *lives* sermons—he is ever as hospitable as his estate will permit, and makes every alms two by his cheerful giving it. He loveth to live in a well repaired house, that he may serve God therein more cheerfully, and lying on his death-bed, he bequeathes to each of his parishioners his precepts and examples for a legacy, and they in requital erect every one a monument for him in their hearts."

We receive many letters from the sons and daughters of New England now residing in the West, but rarely one that does not show a yearning for the hill and stream land of their birth. They seem to say:

"Though not from crowded streets I came,
Methought 'twas long since I had round me seen
Such true repose; though not oppressed with grief
More than time brings to all, I deeply felt
'Twas a heart-healing land. The country there
Seemed God's own country, for the use of man
Intended: * * * * * *
Woods for his health and pastures for his board."

The thoughtful farmer will pardon us for coming up from the furrows for a few minutes to stay among the trees. He will remember that one is as essential to his prosperity as the other, and that both are the gift of an ever watchful and beneficent Being. We pray him also to ponder well the blessings which come with this hay month, fervid, busy JULY.

ROOTS---THEIR EFFECT ON SOILS.

Most plants throw their roots over a great depth in disintegrated subsoils; indeed, where soils are underdrained and subsoil plowed, after their removal they leave in the soil an amount of roots nearly or quite equal to the crop removed, and the portion percolating the subsoil and decaying in place, furnishes new conditions capable of liberating from the subsoil many elements which have been before inert.

The joint action of atmosphere and moisture, together with carbonic acid and other fertilizing gases, all circulating the more freely through passages where roots have decayed, and which by their decay have furnished the necessary ingredients, requires but the action consequent upon the presence of these constituents, assisted by the roots of a living organism, i. e., the next crop, to insure the solution of new quantities of mineral matter from the subsoil. Portions of the mineral matter so liberated, are elevated into the surface-soil, and there deposited, as excrementitious matter thrown off by vegetables, and with the decay of roots thus enrich the surface-soil; and this is also assisted in degree by capillary attraction.

Some have argued that this continual uprising of matter toward the surface-soil, consequent upon the continuous decomposition in the subsoil, must eventually denude the subsoil of its more valuable portions; but it must be remembered that the new conditions produced are such as continually to cause the liberation of new quantities, and that the entire soil being deepened, presents a greater area of surfaces of particles to be acted upon by atmospheric and other influences. To avoid using the material is like husbanding perishable articles until they become worthless.

The roots of a currant crop often extend four or five feet in length. Even the common onion has roots eighteen inches long, the lucern and other clovers by the decay of their roots, percolating deeply into the soil, deposit carbon in place of mineral matter which they take up; part to be returned to the soil by the decay of roots, and

part elevated into the upper soil, while the portion of the crop removed is more nearly renewed by liberating new quantities over greater depths, than if the soil were cultivated on the shallow system.

Every fact, empirical and scientific, goes to prove that deep tillage renders the addition of less quantities of mineral fertilizers adequate to produce crops.—*Working Farmer.*

For the New England Farmer.

FALSE ESTIMATES---HEN LICE.

MR. EDITOR:—You have often noticed the proneness of men to be looking after, and admiring great things. He who studies the character and habits of the lion, the leopard, or tiger, is engaged in a lofty and honorable pursuit. The king of beasts; who would not be proud of the achievement, could he but slay a single specimen? Who would not consider a place among those gathered to see the noble slain, a place of honor? But the man, can he be a man, who is seen looking after bugs, and flies, and lice, who devotes time to such an insignificant, childish purpose, is viewed by the mass of his fellows as trifling with his existence.

But what, sir, would be his position as a benefactor of his race, who should penetrate every jungle on our globe, and destroy the best lion that has made such his retreat, compared with his who should destroy the wheat-fly, or midge-maker, an insect so small that a score placed in the balance against one hair of the lion's mane, would kick the beam. The roar of the lion may frighten a fine bushman, but the appearance of the fly causes a nation to tremble.

But my subject, when measured by might or bulk, is not the formidable giant, that he may be compared with the fly, the bug, or the flea, but is an animal so small that were you to put a gross of them on the tail of a flea, it would scarcely make it droop, or shorten the length of his jump by a single line. And yet, as the skull-caps of the animalculæ form masses of rocks, as the coral insect builds islands in the ocean, and reefs on its coasts, as moments make the whole cycle of time, so then hen lice, when aggregated, will make an extension, and give a visual angle which the human eye can appreciate; yea, more, will cover the whole surface of the perches on which your hens roost, will fill to overflowing every crack and corner of your henery; will cover you if you go into it, and will bite you, if you have not the skin of a Packadermata, most killingly.

Permit me to give you a little personal experience with these scamps. I had last spring about a dozen hens. Their apartment was in the corner of the barn, was about eleven feet long, four wide, and eight high; enclosed on all sides with matched spruce boards, with a twelve light window in the south side. The floor above was not matched. Within was a box of dry ashes, nest boxes, etc. Report came that the hens were troubled with lice. Without examining at once to determine the extent of the mischief, directions were given to mingle sulphur with their food. Soon it was said that the nests and eggs gave lice to those who went to them. A thorough examination was made: there were more animals on a perch four feet long, and three inches in diameter, than there are men, women and children on this globe; so we believe; and every part of the room was thoroughly stocked, and yet there were but few to be found on the hens.

Now for war. Bought one pound of sulphur, and four pounds of the leaf stem of tobacco: set in the henery a tub with some water in it as a guard against fire, and in the tub an iron pot with some coals; filled the pot with the tobacco, and sprinkled on the tobacco three or four ounces of sulphur, and shut the door. After this had burnt out, and the fogo had so far disappeared that admission could be gained, we re-filled the pot with tobacco and sulphur, and gave them another dose. This over, the premises were examined. The lice had been warmed up just enough to make them lively. Not even a cough or a sneeze was heard among them. This was, therefore, a failure. The floor above, and all the boxes, and movables within were then removed, and purified by fire, and the room drenched with boiling water oft repeated. This thinned the ranks, but was not effectual. The next step was to add to a thorough use of hot water, a profuse sprinkling with dry ashes, while the walls were yet dripping. This was repeated from time to time for one or two weeks. The victory was complete; harmony being restored both to the henery and the kitchen. Inference No. 1, Never despise small things. Inference No. 2, Let your henery be plastered, and often whitewashed. Inference No. 3, Give your hens from time to time a little sulphur in their food.

REED.

Pittsfield, Mass., 1859.

For the New England Farmer.

THE POTATO ROT.

MR. EDITOR:—There has been no lack of hypotheses, and arguments most ingenious and plausible have been framed in relation to this disease, but the whole subject has been so thoroughly discussed in every aspect and guise that it would seem a vain attempt to seek to search the cause. Professor BOLLMAN, a Russian Councillor of State, has published a work on the prevention of potato rot. He discovered accidentally, and has subsequently verified by experiment the fact, that seed potatoes, thoroughly dried, will produce a sound crop. Mr. Bollman's room in which his first potatoes were dried was heated to about 72°. By way of experiment, he placed others in the chamber of the stove itself, where the thermometer stood at 135°. It has been ascertained that previous to the final decay the specific gravity of the diseased potato becomes one-third more than that of the healthy tuber, on account of the water it contains; when submitted to a dry heat of 200° it loses its moisture, and the progress of decay is retarded, if it be not stopped.

I was conversing with one of our farmers a short time since in relation to potato rot and the drying process. He said for nine years in succession he had practiced cutting off the seed end sometime previous to planting and drying them thoroughly; when ready to plant he dropped from four to seven in a hill, and he has had no rotten potatoes since he adopted this method. He usually plants the early kinds.

J. W.

For the New England Farmer.

LETTER FROM THE SANDWICH ISLANDS.

MAKAWAO MAUI, HAWAIIAN ISLANDS,
DECEMBER 27, 1859.

MESSRS. EDITORS: — *Gentlemen,*—I have not been able to make you out a communication, I find, since February. Let me hasten to speak with you ere the year closes. In my closing paragraphs, I promised you something touching Pele, the once famed goddess of Hawaii, and of her recent doings. Glad am I to say that I have quite recently returned from a tour round that island, in making which I revisited the crater of Kilanea, and looked upon the lava flow as it mingled its burning waters with the waters of the Pacific. I think that I can say something of what I saw on old Hawaii which will interest our friends, the farmers, and others who read your periodicals.

Hawaii is the largest island of the group from which it receives its name, Hawaii, or Hawaii nei, being the true appellation; this island being 88 miles long and 68 broad. Near the end of October of the present year, I landed from a small schooner at Kohala, the north-west district of the island. Some seven miles in a horse cart took us to the station occupied by Rev. Elias Bond, who has occupied the station some sixteen years. He has been an active and successful laborer, and has seen great improvements since he commenced his labors. He has an excellent, well-finished meeting-house, and some seven school-houses, beautiful, though small, structures of wood or stone. These houses will accommodate meetings for conference and prayer during the week. The country is a grazing one, also adapted to the cultivation of corn and vegetables. Mr. Bond has done a great deal for the heathen population around him; many of them now have lands, and are prosperous farmers; all might do well but for their native indolence. I hope you may hear again from this district. From Kohala we rode to Waimea. Our road lay over the Kohala mountains, 6000 feet high, and as we ascended and approached the summit, we came into the region of Irish potatoes, large quantities of which are raised here for the Kawaihae market, fifteen miles distant. Whale ships, after taking wood and water at Kilo, touch at Kawaihae on their way to Lahaina and Honolulu, and purchase their potatoes. Small vessels also take them to Lahaina and Honolulu. I remarked, too, that cattle looked finely in this mountainous region; the feed seemed scanty, but has the reputation of being very sweet and nutritious, more so than the grass at Kohala, which is plenty, but coarse and unsavory. The prospect on reaching the highest land 6000 feet above the sea, and on descending to Waimea, 2000 feet below, was grand. To our left, Mauna Kea, the highest mountain on the island, being nearly 14,000 feet high, towered majestically, showing signs of winter patches of snow remaining near the top. To the right, Hualalai, 9000 feet, reflected the rays of the setting sun, while in the centre, but at a greater distance, Mauna Loa, like a vast dome, stretched upward to nearly the height of Mauna Kea, and nearly spanned the island in regular slopes. But alas! with all its grandeur, the sight was a deeply melancholy one. Before us lay an area of country, say 50 miles by 30, embracing the three huge mountains mentioned above. Between these there was stretched a vast plain dotted with conical hills of various sizes and heights, craters covered with red and black sand and scoria. Through all this plain we saw a single river, and such a stream! Gentlemen, may you never see the like in New England. It was a river of liquid fire, of molten lava, issuing from the sloping side of Mauna Loa. This was apparent by the columns of smoke ascending from the ignited mouths of several craters, and we could easily trace the stream for many miles by the smoke and gases along its course, and by the fresh and shining lava which it had thrown up in its progress. The whole plain seemed a bed of lava—now, acres of slabs of pahoehoe, like a pavement of immense dimensions, and anon, fields of lava thrown into shapes almost innumerable, from large boulders to pebble stones, and from flat and smooth ones to the sharp-like hatchel teeth and needles. Not a river, brook or fountain of water met our eye on all this plain. Nothing but desolation spread over these immense fields. How unlike the view I once had in crossing the Green Mountains from the east to the west side. As I looked down on western Vermont in the town of Chittenden, I think, and saw the forests, the rivers, the cultivated plains, the grazing herds, and habitations of men, I was most pleasantly affected with the goodness of God to my country. You may well be thankful, friends in New England, that you are spared the seeing rivers of fire—thankful that rivers and brooks of sweet water irrigate your plains and make fertile your fields, and that your mountains, even, are covered with forests and other vegetation. True, there are forests at the base and along the sides of the Hawaiian mountains, but the upper parts of them are nothing but lava, ashes and scoria, and Mauna Loa, as you have now seen, is sending out her burning matter in constant streams. More I will tell you of this fearful phenomenon, ere I am through.

On descending to the plains of Waimea I was happy to find some mitigation of the desolate appearance of things as seen from the mountain above. We found a small river or brook near the station of Rev. L. Lyons. It issued from the Kohala side of the island, and irrigated a small portion of land about Waimea. Considerable improvement had been made here since, in 1829, thirty years ago, I visited the place as one of a Committee seeking in behalf of the Mission a health station. Then all was primitive—purely Hawaiian. Now, there is a pleasant meeting-house, two or three stores, and quite a number of dwelling-houses; cattle, sheep and horses were plenty; but I saw but little in the shape of agriculture, and I am sorry to say that the plains of Waimea were covered with a wild and noxious weed which threatens to destroy the hope of the husbandman. Yours, with much esteem,

J. S. GREEN.

P. S. I must tell you more of Waimea lest you think it, like Sodom of old, blighted by the wrath of a holy God. I have given you Waimea only as seen from the high lands which divide it from Kohala. This portion of the district is certainly, as a whole, sufficiently desolate and forbidding, though the climate is cool, and the prospect is

one of the best on the island. Now please go with me to Hamakua, the name of another district belonging to Waimea. Waimea station is about twelve miles from the sea at Kawaihae, and about the same distance from the sea at Waipio, on the north side of the island. We will visit Waipio. The first three miles the road is level, running through a woody land, large scattering ohia trees—a species of oak—the soil light, but thickly covered with the oi or noxious weed, so that it is well nigh impervious to man or beast. We soon began to descend, and found the travelling more difficult. As we approached the valley of Waipio we turned from the beaten path, riding through the wilderness of ferns and coarse, high grass, till we reached the head of the valley some two miles from the sea. The scenery was exceedingly picturesque. We stood nearly opposite a waterfall which only needs a large supply of water to leave your Niagara all in the back ground. The stream is small. It comes down from the high land back of Waimea, quietly wending its way through the woody country till it reaches the precipice of Waimea. Here it takes a leap, a short one at first, one hundred feet perhaps, into a basin formed in the rock; then, after a short pause, comes the final fall, which is said to be nearly or quite two thousand feet;—yes, two thousand feet into the valley. Much of the water goes upward in mist, but it drips from the rocks and joins the water in the stream which runs through the valley, watering numerous kalo patches, and emptying into the sea. Another fall, full as high, was shut from our sight by a projecting precipice, but we could see the stream made by it. The valley is a fruitful one, and has quite a population; is the glory of Waimea, furnishing much provision for less favored places. The people here are making preparation for building a large stone meeting-house, which they propose to christen *Sana Paulo* —St. Paul's.

DO ANIMALS CONSUME FOOD IN PROPORTION TO THEIR SIZE?

We suppose that this question will generally receive an affimative answer. Mr. John Johnson, of New York, whose success in fattening stock has given his opinion on this subject equal authority with his opinion on draining, has recently written some advice to a young farmer on buying and fattening stock, which answers our question in the negative, at least so far as fatting animals are concerned. He says, in an article published in the *Country Gentleman*, that

"It takes no more feed to fat a lot of sheep averaging 140 or 150 pounds, than it does the same number averaging only 85 or 90 pounds; therefore it is more profitable to feed heavy sheep than light ones. It takes no more to fat a steer that weighs 1400 pounds, live weight, than it does to fat one weighing 900 or 1000 pounds, and the largest will always gain the most, with equal feed, if they are of the same age. Then, when fat, the largest are worth more per pound to the butcher; so there is a profit every way in fattening cattle of a good size, according to their age."

In confirmation of this opinion, he adds that he had heard those whom he regarded as men of practical knowledge, say, that all animals, except man, eat according to their size, and for a long time he believed it, but when he come to feed steers in stalls, some weighing 1000 pounds, some 1500 pounds, and found the largest putting on the most fat and gaining the most in weight, which they would always do, he found those men's theories would not stand the test when tried by practice.

For the New England Farmer.

FARM FENCES---No. 2.

In my communication of Feb. 21, 1860, I spoke of the absolute necessity of fences, their immense cost, their neglected condition throughout the country, the consequent necessity for improvement in them; and the individual and national benefits which would result from such improvements; also, some objections to the kinds in general use, and also the necessity of calling the attention of sensible and practical men to the subject.

As a general thing, agricultural writers and speakers seldom even allude to it. I do not recollect of reading more than three or four articles in any paper upon the subject, one of which was from the pen of Judge French, upon wire fences, and the others were reports of the discussions at the Farmers' Club of the American Institute where one of the speakers recommended doing without them,—an idea not quite original with him, for, in some parts of the country, immense fields of once fertile and valuable land, by bad management, have been made a barren waste and "turned out" as not worth the cost of fencing. At our agricultural fairs, farms, farm implements and farm-products, horses, oxen, bulls, cows, calves, sheep, hogs, pigs and poultry, hens, so rare, so prolific and so beautiful that a few years ago they would have caused "a fever," corn, oats "peas, beans and barley;" splendid cheeses and immense squashes, big cabbage heads and nice honey; performances, pedestrian, equestrian, and, I had almost said, ridiculous; plows, harrows, cultivators, corn-shellers, mowing machines and patent sausage-fillers, steam plows and improved apple parers, all compete for the glittering prizes, and receive commendations of committees and orator, while fences, which, like watchful sentinels, guard and protect them all, and are a more costly production than all put together, are passed by as of little worth, or consequence.

Let State agricultural societies offer liberal premiums for specimens of the best new fences, and, in a few years, we shall see fences much more tasteful, durable and economical upon all well-managed farms, taking the place of those that are now a reproach and burlesque upon the agricultural improvements of the age.

In my remarks, I wish not to be understood as discouraging the building of all the kinds of fences that are in general use; there are cases where stone wall would be a very durable fence, also where it might be expedient to build one of brush or logs, as it is sometimes better to build a log house than any other; but I do wish to be understood as opposing with all earnestness the divid-

ing and subdividing of fields with wall fences, or the building of one wall by the side of another "to get rid of the rocks." A few years since, a farmer in Worcester County, Mass., remarked to a friend, that he had more than 20 miles of wall upon the farm where he lived and an adjoining one! His fields, as I looked upon them from the road, very much resembled in their dimensions, those necessary enclosures we find in almost every town, called the Common Pound. His fences must have cost more than $6000, and have put many acres of land out of reach of the plow. On some farms, wall fences are built 10 or 12 feet in width, "to get rid of the rocks"—a fence so inconveniently wide that a politician could not possibly stand on *both sides* of it at the same time, with any degree of comfort! Building fences "to get rid of the rocks" is not quite so bad as the Irishman's arithmetic of taking one from two and three remain, but is just about as absurd as his proposal to dig a hole in the earth by the side of another to get the dirt with which to fill it!

But what shall be done with the rocks? Many farmers have yet to learn their value for road-making. Fill all low and wet places any convenient depth with them, putting in the large ones first, then fill the spaces with the small ones, and cover with dirt. Line the banks of streams with them, fill deep gullies, do almost any thing with them rather than build unnecessary fences. Much of this can be done in winter.

In the article upon wire fences written by Judge French, he speaks of "their being invisible at the distance of a few rods," which he seemed to think was a recommendation. I feel reluctant to question anything from one so eminently qualified to instruct in almost every thing pertaining to the prosperity of the farm, not only above but *under* the ground; but my experience is unfavorable to the acknowledgment of this particular merit of the wire fence.

The next day after one was made by a neighbor on his farm adjoining mine, a fine horse which I had turned into the field next to it, having no more regard for territorial rights than some members of Congress, went straight through it, breaking every wire from "turret to foundation." The fence was made of No. 9 wire, 8 wires high, and secured to cedar posts 10 feet apart by spikes driven into them. My sheep, which may be of the "creeper breed," inquired for in the *Farmer* would often creep through between the wires, and sometimes break them. I have but one other objection to make to them beside their "invisibility," which is, that, for general purposes, as they have been built in this section, they are just about good for nothing.

At another time, I may say something of the relative value of different kinds of fences, the quantity of land they cover, and the qualities a good one should possess. "The suggestions as to the best size of fields on farms of fifty, and those of one hundred or more acres," I much prefer should come from some one better qualified to make them. CHAS. R. SMITH.

Haverhill, N. H., May 1, 1860.

COOKED FOOD FOR HOGS.—We would refer our readers to our volume II., p. 11, for a letter by Mr. P. Mason, of Somerville, N. J., on the use of cooked food for hogs. Mr. Mason found that by using cooked corn meal, from the middle of April to the first of December, he increased the weight of two pigs, from about 40 pounds to 602 pounds, being a gain of one and a quarter pounds per day, and that the entire cost of the pork was about four cents per pound. This probably cannot be brought about at so light a cost with uncooked food.—*Working Farmer.*

THE OLD FARM-HOUSE.

In a little grove of shade trees
  Stands a farm-house, brown and old,
With a wealth of vines around it,
  Gemmed with flowers of red and gold;
By the path that makes a circle
  Of white sand around the lawn,
Grow sweet Timothy and clover,
  Rosy as a June-day dawn.

Around its door pale morning-glories,
  Jump-up-Johnnies, dahlias, pinks,
Cluster—concentrated beauties,
  Married by a thousand links;
Links of love, the works of nature's
  Mystery of handicraft;
Links of glory, through which
  Argosies of perfume waft.

And the gate that swings before it,
  And the fence as white as snow,
Stand on variegated cushions,
  Which the sun-fire sets a glow;
Crowning them with many colors—
  Yellow, purple, green and blue—
As if rainbow there had fallen,
  Melted into rarest dew.

On its roof the greenest mosses
  Catch the shadows from the trees;
On its sides red honeysuckles
  Make their curtseys to the breeze;
And the ever-nervous willows,
  Standing near the garden's bound,
Throw a web of shade fantastic
  On the clover-mantled ground.

O'er the well an arch of grape-vines,
  Formed with heaven's directed care,
Chains the shadows to the water,
  Making cool the summer air:
And a tiny church, its steeple
  Piercing through a bower of leaves,
Is a sure and sacred refuge
  Where the wren her carol weaves.

THE LATE HON. B. V. FRENCH.—At the last monthly meeting of the Massachusetts Horticultural Society, after feeling allusion to the decease of many of the original officers and members of the society, Col. WILDER officially announced the death of Mr. FRENCH in eloquent and appropriate terms, and concluding by offering the following resolutions, which were unanimously adopted.

Resolved, That in the death of our fellow-associate, the Hon. Benj. V. French, we acknowledge the afflictive dispensation of Providence, in removing from our Society one of its founders and former officers, who for a long course of years sought zealously to promote its well-being and prosperity.

Therefore be it further resolved, That in common with all who take a lively interest in rural art and rural happiness, we will ever cherish a grateful

recollection of his devoted and honorable exertions to improve the agriculture and horticulture of our country; and especially of that frankness of character and kindness of heart, which had gained him the confidence and respect of a large circle of friends.

Resolved, That these resolutions be entered on the records of the Society, and that a copy of the same be transmitted to the relatives of the deceased as a tribute to his memory.

For the New England Farmer.

DRAINING AND STUMP EXTRACTING.

Mr. Editor:—Supposing that farmers would like to hear of actual experiment in this department, I will give my experience. Occupying a central position in my farm lands, was as forbidding a swamp, of about fifteen acres, as can be found in New England, with bushes and bunches of maples growing as thick as they could stand, perched on stumps of a former growth, around which water stood the most of the year. When the water overflowed this, it found its way across a twenty-five acre lot, through an open ditch 1000 feet in length, and emptied upon the surface of a large cedar swamp.

A few years ago, the desire to subdue the swamp first mentioned began to come into action. First, I wanted the geography of the bottom; to get at that, I took a light iron rod, twelve feet long, and creeping in among the thicket, thrust it down where there was an opportunity. In these explorations I found a depression of the bottom, of about two acres, in which my rod would sink its length in the middle. Here was a grand deposit of peat, the muck in the rest of the swamp being thin, generally. To obtain some of this peat deposit, I continued the ditch in the valley, through the bushes, 400 feet, which took off the surface water; then, by clearing away the bushes and stumps, and making a plank road to the shore, I managed to get out 1500 horse-loads, by digging as in clay holes, leaving a dam of undisturbed peat between the cuts.

In the meantime, I was reading the *Farmer*, and there saw Judge French's letters and lamentations, as he travelled about, to see so many places worse than useless, that could be made into the most valuable land by the use of tile drains. By those readings, my mind was opened to see things in a more intelligent light. I then conceived the plan, by laying a drain, of getting clear by one operation of the ugly swamp, getting at the great deposit of peat, which I found was of excellent quality, and making a grand reservoir for sudden floods, and filling the nuisance of a ditch that kept the valley below so cold and wet that no useful thing could grow, besides being in the way of all farm operations. A survey was taken, and it was found that the swamp to be drained was six feet above the cedar swamp, and by digging five feet on an average, one-fourth of a mile, through a concrete of iron, clay and gravel, almost as hard as stone, I should get four feet of peat clear of water. It was a formidable looking job, especially as we had to excavate under a railroad, beneath a culvert, and get almost every inch of earth by hard blows of well sharpened picks.

I ordered 1400 pieces of five inch tile of Messrs. Shedd & Edson, of Boston. In the summer of 1858, I put down 1000 feet, and this last season, put in the remaining 400 feet, to the reservoir from which the peat had been taken, and which was full of water, holding about 10,000 cubic feet. Having taken proper precaution to protect the pipe from being filled, the last barrier was cut away at five o'clock in the evening, and as the stagnant waters suddenly sprang for the open pipe, I flung my hat into the air, and the half dozen spectators gave three cheers, sympathizing with me, knowing what obstacles I had surmounted in the attainment of so desirable an end. The next morning, I visited the place, to see how much the water had lowered, and to my surprise, it had all gone, and everything appeared as though it had been so for half the night! That is, 10,000 feet of water had gone one-fourth of a mile, in a few hours, through a five inch tile, with a descent of two inches to 100 feet.

Could I have seen the result of actual experiments like the above, before I bought the tile, I should have considered myself well paid in taking the *Farmer* five years, to find it. Next I cut an open ditch through the swamp, above the reservoir, to let out all the surface water, and waited to see the result when the next flood came. It came in September, and it was a flood; the surface of the earth being dry, the water rushed in from the surrounding hills, and filled the reservoir and ditches, bank full. The rain ceased on Sunday afternoon. The next Wednesday morning, all was dry as before. We have had quite a body of snow go off this January, but it made but little gain in the reservoir; so it sums up thus: the drain is a perfect success. The whole cost was about $200.

Now I have the foundation laid for improving the swamp and upland simultaneously, by carting out the peat to the sandy lands, and making them fertile. Then by having all the small drains converge to where the peat is dug out, I can get a thorough drainage in any direction in the swamp.

While going on with the work of draining, I have also cleared off the bushes from a few acres. The bushes are cut at the most convenient season. August is the time to burn. If the bushes are cut in winter, which is the best time, all things considered, we pass over the fallen brush in August with a scythe, and clip the shoots that grow up through; in a few days they become good kindlings to make the fire run. When it has been dry weather about two weeks, I set fire at one o'clock; at that hour in a clear day a fire will run briskly, and make sure death to most of the bushes.

While approaching the point at which I arrived last fall, I had my eyes open to find in the papers, patent office reports, agricultural fairs, ware-houses, and other places, some machine to pull stumps, that was cheap, portable, and not at all particular what kind of a place it had to stand on. I found windlasses and capstans on frames, with and without wheels and runners, some requiring anchors, some standing on their own work, lifting, as a man would lift himself by his boot-straps; others, twisting, with cattle; all of which may be good in some places, but would not apply to my swamp.

The pictures of these represented them as pulling little stumps from surfaces that appeared like a gentleman's lawn, having no more resemblance in the size of the stumps and condition of my ground, than a farthing candle has to the orb of day. So I set to work, myself. First, I made a

pulling screw, which would take up anything; but, like others, was not practical. Then I got a better idea, and after spending $300 or $400 in experimenting, testing and re-constructing, I have got what I was after; a machine that can be handled with perfect ease by three men, stand anywhere, lift vertically, with tremendous power, stumps, rocks, trees with frozen balls, sunken ships, massive castings, or forgings at iron works, or any heavy weights; has no revolving shafts, gears, bolts, or machinery, to get out of order; without friction, requiring no oil, all of iron, weighing less than 300 pounds, excepting the tripod from which it is suspended, when at work in the open field.

What appeared the great obstacle in the way of making the swamp valuable, vanishes, when we have an implement that we can set over stumps that measure from ten to twenty-five feet in diameter, [circumference, ED.] and hoist them out in a few minutes, without digging, or cutting.

Kingston, Mass., 1860. CALEB BATES.

EXTRACTS AND REPLIES.

BEET SUGAR.

Your correspondent, "W. D. L.," New Ipswich, inquires, "Can any one give me the process of manufacturing the juice of the sugar beet into sugar?"

Process of Making Beet Sugar.

Grind the beets, put the pulp in a bag, press out the juice, heat the juice to 160 degrees, add cream of lime, stir well. Let the mixture rest a little, then raise the heat to the boiling point. When a scum is formed, stop the boiling, and when the juice becomes clear take off the scum completely, then evaporate as in making maple sugar, skimming off the flaking stuff from time to time. When reduced to a thin syrup, filter through animal charcoal; let there be a coarse cloth strainer placed over a vat or boiler, put the charcoal in the strainer and cover it with another coarse cloth, said strainer to be large enough to hold a given amount of syrup; when filtered, boil down till a brittle thread is formed from a little syrup placed between the thumb and finger; it is then sufficiently concentrated to form sugar.

Cream of lime is made of lime and water; 40 grains of dry lime to one gallon of thin syrup, more or less, as experience may show needful.

Animal charcoal is made of charred bones—not calcined bones.

The juice of beets is very liable to take on fermentation. Sulphite of lime will prevent that.

Full-grown beets will not yield so much sugar as those will do which are a little short of full growth.

A cider mill will do to grind the beets. The residuum may be fed out. The French white sugar beet is preferred. D. FRASER.

New Lebanon, N. Y., April, 1860.

THE SECRET OF HAVING GOOD MILCH COWS.

I have twenty cows, mostly grade short-horns, all of my own raising. I carry my milk to town every night, and retail it to customers at five cents a quart in summer and six in winter; by so doing I save a great deal of time by being at home mornings. As my pasture is small, I raise a great lot of corn fodder, which I consider the best of green crops for milk. I raise 1000 bushels of mangolds and 500 bushels of carrots yearly, which I feed to my cows at noon each day, giving them chop feed morning and evening, with four quarts of shorts at each feed.

My cows average seven quarts of milk daily for the year. I often hear persons complaining that their cows are doing poorly, but I think the men are mostly to blame, as I am satisfied that a cow cannot give milk on meadow hay and poor attendance.

Marblehead, Mass., 1860. SAMUEL GRAVES.

LEGHORN FOWLS.

In reply to your correspondent who asks for a description of Leghorn fowls, I would say that in size and habits they are very much like the Black Spanish. I like them much better than the Black Spanish, for while the latter are good layers only in warm weather, and have dark legs and skin, the Leghorns lay younger, (mine being but four months old when they commenced, and have laid from that time to this without offering to sit,) their legs and skin are yellow, their color white tinged with yellow, except a few which are Dominique or hawk color, with very large single combs and wattles, much larger than the Spanish. I have but eight hens, which average over six eggs a day, which I am selling at one dollar per dozen. They hatch remarkably well and are very hardy. L. R. HEWINS.

Foxboro'. Mass., May, 1860.

BUGGY PEAS.

I once tried an experiment, and to my great satisfaction found out something that I never knew before. Finding an immense number of bugs in some peas that I was about to sow, I thought to ascertain where they came from. So after I had raised a crop from the buggy peas, and as soon as they were ripe, I gathered a phial part full of the aforesaid peas, and corked them up tight so that nothing might get into them. I then placed the phial in safe keeping, and in the course of six or eight weeks examined it and found it swarming with living bugs; then I came to the conclusion that they must have bred in the pea. By opening many of them, bugs would roll out like chickens from eggs, and soon after uncorking the phial they left their place of confinement. Now it remains a mystery to me to know from whence they originated. If you will inform me of the mystery, and give me a remedy so that my peas may not be eaten up by bugs, you will much oblige a querist. For where stones and stumps occupy so much of the soil, it is well that we make every pea count. L. T. D.

Green Mountains, Vt., April, 1860.

REMARKS.—The pea weevil deposits its eggs in the blossom of the pea, where the young grub is hatched, and feeds upon the inside of the pea. Pour boiling water upon the peas before you plant, let them stand in it ten minutes and the bugs will be destroyed.

A VALUABLE SALVE.

I was the inventor of the "Golden Salve," which I have used for more than twenty years. I have given a receipt for making it to many of my friends, some of whom are manufacturing it quite extensively. I consider it the best salve or ointment, ever used for man or beast. So valuable a receipt I think I ought to withhold from the public no longer. Many a poor person could make it and sell to their neighbors, who did not choose to make it for themselves.

Linseed Oil	2 qts.
Beeswax	3 lbs.
Rosin	3 lbs.

Heat and stir the articles until well mixed.

Rutland, Vt., May 3, 1860. J. WESTON.

HENS AND CHICKENS.

Keeping a few hens for the first time, I thought I would ask advice through your excellent magazine, in regard to the feeding and care of them. I have fed them on oats and what bits are taken from the table. About three times a week I have given them a gill of flaxseed to every six hens, having a lot of it, for which I had no use. My rooster, one of last June's chicks, a black Spanish game, has died. He had no use of his legs for three days; he refused his food, but would drink a large quantity. After death his comb turned to a dark purple. I have a hen of the same breed taken in the same way. If you, or any of your farmer friends, can give me light on this subject, you will greatly oblige A SOMERVILLE BOY.

P. S. Is linseed oil in small quantities, as above, good for them? and would chicks thrive on it?

THE COMMON MILKWEED.—[Asclepias Cornuti.]

The generic name of this plant is derived from the Greek name of Æsculapius, to whom the genus is dedicated. This species is called Cornutus's Asclepias, or *A. Cornuti*. It bears an other name given it by the great botanist, Linnæus, *Asclepias Syriaca*, who, perhaps, thought it was a Syrian plant; but Dr. Darlington says it is exclusively an American species. It is also called Silkweed, on account of the beautiful silky hairs of the seeds, which bear the latter to a long distance, and thus sometimes scatter it over extensive districts. When this plant is wounded, it emits an abundance of thick, milky juice, resembling in both taste and color the juice of the common garden lettuce. Indeed, the milkweed is by some called *Wild Lettuce*, we suppose on account of the resemblance of these juices in the two plants.

The milkweed is not specially obnoxious to the farmer, and is not very difficult to exterminate, unless it has for a long time been allowed to occupy the ground, and get permanently established. It does not take root like the chicory, where it requires two men to pull up a single plant.

In the engraving, the small figure at the right represents a single flower, and that at the left, the seed-bearing pods reduced in size.

TO KEEP POTATOS IN THE CELLAR.

Put them in a pile as deep as you can conveniently. I have for three or four years noticed that where they were deepest they kept the best. Last autumn I put out about one hundred and twenty-five bushels in one bin, and filled them two feet and a half or three feet deep. They have decayed but little, and I found more rotten ones near the top than anywhere else. My potatoes are principally the "Lyman Seedlings," a potato originated and cultivated extensively in this region. They are very good for table use, but little inclined to decay, and yield much better than the average of varieties. They are also good size, larger than the most, and will keep good late in the spring, or I might say until August. P. W. Lyman.

Easthampton, Mass., 1860.

Remarks.—Mr. L. will please accept thanks for the samples of potatoes sent.

SOUTH DOWN AND LEICESTER SHEEP.

Mr. B. F. Knight, of Derby Line, Vt., we learn has full-bred South Down and Leicester sheep for sale at fair prices. One of his South Down bucks weighs 225 lbs. when in good condition.

PEACHES.

A correspondent of the Ohio *Cultivator* asserts that the only way to make sure of a crop of peaches every year is by grafting upon the wild plum stock.

For the New England Farmer.

THE SEASON IN IOWA.

It is now a year since we had a drenching rain in Iowa. The springs and streams are very low, and a pinching drought at the opening of the season threatens another year of disappointment and trial to the depressed farmers, and to everybody else. In the spring of 1857 and 1858, we were obliged to pump the superfluous water out of our cellars; now we have little or none in our wells. Many are resorting to the giant ditcher, which has been used successfully in Illinois for seven years. This is a kind of huge plow with a coulter running down five feet into the hard clay, having an enlargement somewhat like a flat-iron at the bottom, which makes a drain five or six inches in diameter, and secures a living stream of water, in low ground, where none had been seen for months before.

Our prospect for a large crop is very good, if we may have but a seasonable rain. A large amount of corn has been put in, and the wheat is

well up, but suffering for want of moisture. The late cold weather killed most of our fruit, the trees being in bloom some two or three weeks earlier than usual.

The emigration is large, this spring; but almost all of it going beyond Iowa, to Pike's Peak, Kansas, &c. The increase of our population from this source will be less, I judge, than for several years past.

The great depression of all kinds of real estate continues without abatement. Very nearly one-half, on an average, property has depreciated within the last three years. But, one good harvest would turn the tide upward again; so we are still hoping and looking for better days.

Tipton, Ia., May 15, 1860. M. K. C.

For the New England Farmer.

THE NEW ENGLAND FARMER, AND ITS INFLUENCE.

MESSRS. EDITORS:—Are we aware of the value of this important paper, and do we prize its worth every week? Is there not four cents' worth of information in each of its numbers, and even more at times? Here we find things needful in every department of manual labor. Says one, "What do editors know in Boston about farming?" But is it not the voice of the country people who have had experience that we hear? It is true that the editors have a chance to see many good things by observation, and give valuable hints which may prove beneficial. What an influence Judge French has had on the subject of drainage. Have not farmers saved by this in one year enough to pay for this valuable paper, by getting his crops in earlier, and more to the acre, than formerly?

Fertilizers.—The *Farmer* gives us a history of fertilizers, and their adaptation to our lands. It also gives the market prices of most kinds of produce every week, and a good story for the children, as well as a sermon to those that stay at home on the Sabbath. I can look back twenty-five years, and well remember Judge Buel's *Cultivator*, which was the birth of agricultural papers, and it awakened people to the improvement of the soil and the mind. Now ride through the country, and see how plainly you can tell where there has been an agricultural paper taken; about the farm things look neat and tidy. But, alas, look at the opposite, and you will see the carts and tools left as last used, wood scattered all about, fences down, and trees, and shrubbery, and buildings, going to decay. Now put the *Farmer* into his hands, and get his mind turned, and his trees will bear bountifully, his vines will prosper, and cattle and sheep look up smiling, and repay him in butter, and cheese, and wool. He will have vegetables that he did not once raise, will get his buildings painted, and cause a jubilee among his sons and daughters, and have reason to thank the editors for the peace and harmony they have restored in the old

HOMESTEAD.

Marlboro' Depot, N. H., 1860.

REMARKS.—We publish the above for a special purpose, notwithstanding it has a little appearance of self-laudation. That special purpose is to correct an impression which seems to prevail with some of our readers. Our correspondent says: "It is true that the editors have a chance *to see many good things by observation, and give valuable hints*," &c. Well, we guess they do—but it will not be amiss for us to say that our business is that of a farmer: that is, we, Simon Brown, Editor of the Agricultural Department of the *New England Farmer, are a farmer*, and not only *work upon the farm* with our eyes and ears, but *with our hands*, as well as with our tongue and pen! We furthermore find it a pleasant, and health-giving, and money-giving business, and we never felt more like a nobleman in our life, than yesterday, May 22d, 1860, when we stood in our orchard of about five acres, and beheld what had grown up there from the labor of our own hands! What! presume to conduct an agricultural paper, without daily experience on the farm! As well attempt to "make a whistle from a pig's tail." We not only *direct* the work on the farm, but we say "*come*," boys, not "go," as far as time and strength will permit,—and we make experiments in grasses, grains, potatoes, garden stuff, fertilizers, and implements, and machines, every year. Beside all this, we go forth with our eyes, ears, and note-book, if necessary, wide open, and calculate to be up in the morning as early as any man ought to be who means to hold out all day! There, we have made a clean breast of the matter, or, in common parlance, have done it up BROWN, and do not intend to refer to the subject again.

THE SEASON AND THE CROPS.

After the long and trying drought which had prevailed for months, we had a timely rain last week, and although less than an inch fell, it has had a wonderfully reviving influence upon all the crops. The grass seemed to feel its revivifying influences instantly, assumed a new color, and has since grown with great rapidity. The trees also expanded their leaves and blossoms as though by magic, and now give great promise of an abundant harvest.

There have been two or three frosts in this region, but not so severe as to cause general destruction of young and tender plants.

Spring work has not been interrupted by the wetness of the land, nor by showers or storms, so that the crops were early in the ground, and now only wait the blessing of Heaven, and the watchful care of the husbandman to carry them on to maturity. With the single exception of the impending disease among cattle, everything appears cheerful and prosperous for the farmer.

CRANBERRY PLANTS.—We learn that Mr. JOSEPH L. DANIELS, of Milford, Mass., takes much interest in the culture of the cranberry, and has fine plants for sale.

THE CATTLE DISEASE CALAMITY.

We do not exaggerate in calling this disease a *calamity*—it has already proved so, and we fear its calamitous effects will not be circumscribed by the limits of Massachusetts. Persons not familiar with the extent of the cattle business in this State, will undoubtedly entertain hopes that the disease may be arrested, long after the hopes of those who are acquainted with this business will have vanished into thin air. The changes that are constantly taking place among cattle are very great, and they transpire in every portion of the State. We know of dealers, who are not butchers, but who own several hundred cattle annually, and these hundreds are mingled with as many more in collecting them, and in driving them back and forth to their places of pasturage. Some of these cattle are sent into the hill towns of the State to be pastured, but the largest portion are sent into New Hampshire, where buying, selling and exchanging is carried on to a greater or less extent every year, both in spring and fall. Thousands are thus sent from Middlesex county annually, so that if the disease does exist in any of the animals sent away, every favorable opportunity is afforded for extending it. Looking at the matter in this light, the cattle dealer, and those best acqnainted with the business, will see how prompt and decided must be the work of those clothed with the power to try to arrest it. Indeed, where the opportunities of intermingling cattle are so numerous and so widely extended, and the activity among cattle-dealers is so great, there *is* probability that all the wisdom and skill of man will be exerted in vain. Still, it is his imperative duty to do everything in his power to stay its fatal march.

The people are now alarmed, and justly so. A calamity is really impending, such as they have never been called to contemplate before—it is already upon them, or needs but a single stride to bring it to their door-ways, and perhaps to sweep every animal from its accustomed stall, leaving the farm desolate and helpless, and its occupants almost in despair. More or less cattle are always sick in the spring, and it is quite common that they have a slight cough: we have heard of several deaths among them within a few days, and have visited many farms where it was feared the fatal disease existed—but for the comfort of our friends, we are able to say that in every case, with a single exception, there were no evidences whatever of the disease known as pleuro-pneumonia. This exception is on the farm of Mr. ANDREW WELLINGTON, of East Lexington, where a single cow, which we saw on Saturday last, exhibited strong symptoms of disease, and some marked ones in common with those of cattle whose lungs we examined after they were slaughtered. A cow in health breathes some ten or twelve times per minute; this cow breathed from thirty to forty times per minute. The eyes did not show the strong symptoms which prevailed in those we saw at North Brookfield, but they did not appear quite natural and healthy.

The report that the disease had broken out in Seekonk and Pawtucket was erroneous. We have conversed with the person who lost the cow at Pawtucket, and with the physician who examined her, and upon a comparison of the symptoms these gave with those of cattle affected with the pleuro-murrain, they were satisfied that the cow did not die of the disease. And so it will prove of many other rumored cases.

What we understand to be the meaning of pleuro-pneumonia is—that the thin membrane which surrounds the lungs, and called the pleura, and the lungs themselves, are highly inflamed. Human beings have pleuro-pneumonia every day, and this we understand to be the condition in which their lungs are found. But such was not the case in the lungs of the cattle we examined at North Brookfield. Here was little, if any inflammation, but the lungs were enlarged, and the air-cells so filled as to nearly solidify the lungs, so that there was not room for a full inspiration, and the breathing consequently became short and frequent. These cells were not filled with pus, or corrupt matter, but with something more solid and less offensive, but equally fatal.

It is quite certain now that *the disease is highly contagious;* that the most minute particles of tainted matter are thrown from the lungs by the breath of affected animals, and that these particles, or sporules, as they are called, utterly incapable of being seen by the naked eyes, they are so small, will impart the disease to other animals receiving them into their lungs. These particles may be communicated by one animal breathing directly upon another, or they may be lodged upon the stanchions, timbers, floor-way, or even the hay in the barn, and from them be taken off by healthy cattle.

We believe, therefore, that the term *pleuro-pneumonia* does not indicate the disease—but that is it something beside, and vastly worse—that it is a specific malady, a plague that will encompass the whole land unless the most prompt, energetic and thorough measures are taken to prevent it.

Now, what shall be done? Let us suggest. Let the farmer make up his mind to do most of his work, for a few years, at least, with horses, and introduce immediately upon his farm the best breed of sheep he can find. These may prove profitable substitutes in some cases, and in all, perhaps, a partial compensation for the loss of the cattle. The sheep selected should be good mut-

ton sheep, as well as for wool, so as to supply the deficiency in beef; and with the united advantages derived from the sale of wool and mutton, and the reclamation of thousands of acres of exhausted pastures through the agency of sheep, the cattle disease may prove in the sequel to bring some important compensations with it, after all.

At any rate, let us keep up good courage, and exercise daily a bright and earnest faith that all will be well in the end.

For the New England Farmer.

NEW PLANTS.

The following article was read by MINOT PRATT, before the Concord Farmers' Club, January 5th, 1860.

In attempting to say a few words on the new plants that have been introduced to our notice for cultivation within a few years past, I shall, for the moment, consider all as belonging to that class that were new to me; though very likely some that I shall name may be familiar to those who have had a longer and a wider experience. And in speaking of them, I shall give, in a brief way, my own experience in their culture, leaving others to form their opinion as to whether my conclusions are just or not.

Without further preface, I will begin with the *Chinese Sugar Cane*, a plant that was heralded in with a great flourish of trumpets, as something that was to make every farmer a rich man, and sweeten his toil and his tea with an abundance of cheap sugar, with molasses or syrup enough to do up any other sweetening he might need, besides furnishing for our cattle a cheap, palatable and nutritious fodder. As a class, we farmers are said to be slow to adopt great improvements. Some, perhaps most of us, tried this sugar cane on a small scale. It was introduced some five or six years ago—can any one now give us the statistics of its culture in Concord for the past year? Sanguine, honest men advised its culture on trial; shrewd, speculating men urged us to go into it with a rush—some of these may have had seeds to sell, which they sold at a small advance on cost. Would it be going too far, to suggest that those who bought the seed were also *sold*? I believe the plain, common sense farmers of New England are now nearly, if not quite, unanimous in the opinion that the Chinese Sugar cane is not a valuable addition to the plants now cultivated here. It requires a longer season than can be certainly depended on; and, as a forage plant, it has not been found superior, if even equal, to the varieties of corn usually cultivated for that purpose. It is of slower growth, less luxuriant in leaf, and of harder texture in the stem. Not having made any attempt to manufacture sugar or syrup from it, I am not qualified to speak of it in that connection.

The *Dioscorea Batatas*, or Chinese Yam, is another of the new plants that were to work wonders among us. I bought some of the cuttings, paying for them about three or four times their weight in silver. After some pains to start them in pots in the house, the plants were set a good distance apart, in a rich spot, previously trenched and manured in humble imitation of Capt. Moore's method, piling it on till I thought there was enough, so as to give our new friends enough to eat, and a fair chance to spread. In due time, though not till the weather became decidedly warm, the vines started and grew; not at a speed that made it necessary to step quick to get out of their way; but they grew some three or four feet in the course of the season. Of course, as autumn approached, with this promising crop in prospect, one's slumbers could no longer be troubled with dreams of poverty and hard work; except the hard work of carrying to the cellar the magnificent crop that was soon to be harvested. Visions of the new store room to be built, of the wealth that was sure to come, of the ease that was to be enjoyed, were quite natural, and excusable, even in one whose day-dreams of great success had been usually disappointed. The harvest day so long and impatiently anticipated, at length arrived. With spade in hand I went to work to dig up the yams, beginning at a distance from the plants so as not to injure the roots, and slowly and carefully, partly with hands, and partly with spade, the earth was removed, till at length the long white tuber began to be visible. Then with increased care the soil was scratched away to the depth of nearly two feet, and the whole prize was brought up and laid on the ground to be admired. The yams were all dug in about half an hour, though they did not all come out whole—amounting, as I now remember, to about two pounds in weight. With the assistance of Mr. Pinkham, I have made a nearly accurate calculation of the cost and profit of this crop. Cost of cuttings, $3, manure 10c, trenching 8c, planting 2c, hoeing 8c, harvesting 5c. Total expense, $3 33. Value of the crop, estimated at $20 a ton, 2c, which, deducted from the cost, leaves a loss of $3 31. Mr. Pinkham decidedly agrees with me, that no farmer can get a living and pay for a farm out of such profits. This little bit of experience almost convinced me that it would be unwise to depend on the profits of unhatched chickens to pay a note at the Concord Bank.

In regard to the possible profitableness of the *Dioscorea*, it is safe to say that the crop must be large in order to make it pay. The labor of harvesting must necessarily be great. The form of the tuber is much like that of a carrot growing upside down. At the same time, its texture is very tender, and a slight pull breaks it, and leaves the big end in the ground. Consequently, you must dig a trench to the depth of 18 to 20 inches, and withal be very careful, or many of the tubers will be broken. With me, each plant produced but a single tuber, running straight down, and as this was the case in every instance during several years' trial, it is probably the habit of the plant.

The *Chufa*, or *Earth Almond*, is another of the new plants I have tried. It was distributed by the Patent Office, and recommended as bidding fair "to become a valuable crop for cattle and swine," and a good substitute for coffee. The plants grew well enough, and produced a large number of small tubers, averaging about the size of a cranberry bean, and of a pleasant flavor; but as they were closely covered with fine fibrous roots, to which the fine dirt adheres, it was difficult to clear them for use, and their culture was discontinued. The quantity grown, about three

half pints, was hardly sufficient to test their value in feeding "swine and cattle."

The *Vetch* was strongly recommended to me by an Irishman some years ago, to be sown with oats, and used as green fodder for milch cows in summer. I procured two quarts of seed, gave the man liberty to select his land, and prepare it to suit himself. The result was a total failure, so far as the Vetches were concerned, very few of them growing more than six inches high. Another Irishman has since said that the soil, a strong, clay loam, and rather cold, was altogether unsuited to the plant—that in Ireland, it is put on dry, gravelly soils. I feel disposed to give it another trial, though very likely the differences of climate will prevent its successful culture here.

Hungarian Grass, or *Millet.*—Several years since I sent to an advertiser in Iowa for a small package of the seeds of this grass. It was said to grow so rapidly, that it would produce two heavy crops of hay, and afterwards mature a crop of seed the same season. I received about a table-spoonful of seed, and sowed it in a row that it might be kept clean, in a good loamy soil, neither light nor heavy, and made rich to give the grass a chance to do the best it could. When it was beginning to head out, a small portion at one end of the row was cut, to test its power to produce a succession of growths. About one-half the plants sent up rather feeble and slender stalks, and ripened seed. The second year I sowed about an eighth of an acre. The crop was small, decidedly inferior to common millet growing by its side. It was eaten with avidity by the cattle, who may be supposed to be good judges of its quality. But after trying it two seasons, I came to the conclusion that my soil was not able to keep the promise of those who introduced the plant. It has been cultivated by others with various success; some finding it a valuable and profitable crop, while the experience of others has been similar to my own.

A few years ago the Patent Office sent out some *Crimson Clover* seeds, a paper of which came into my possession. Though sown in what I have found to be good soil for the common red clover, it sent up only single and small stems, flowering the first year, and dying the winter following. I sowed again the last spring on a dry, gravelly soil; here also the plants shot up and flowered in a small, spindling manner, with every appearance of being an annual, of no value to the farmer.

So far, I have named only those plants that have not succeeded with me. The list might be extended, but I have hardly left room and time to say any thing of some valuable ones that have proved equal to their recommendations. Among these, there are several varieties of turnip. The *Orange Jelly*, a round, yellow-fleshed turnip, promises very well. It grows to a good size, keeps well, is tender, and of very fine and delicate flavor. I think no one who has eaten it, will willingly discontinue its cultivation. The *White Strap-Leaf* turnip, a large variety, with large and numerous leaves, more suitable for cattle, has also yielded well, when sown as a second crop among some seed parsnips. The *White Norfolk*, also a large leaved variety, and the *Purple-topped Aberdeen*, have yielded satisfactory crops.

In conclusion, let me express the hope that the failure of some plants, that we experiment upon, may not discourage from the trial in a cautious manner, of whatever may offer itself to us with good promise. We may meet with frequent disappointments, and few successes. But one real success will counterbalance many failures. A failure here is a temporary affair, a disappointment for the moment only; but the discovery and adoption of a new valuable plant is a perpetual success; it carries its benefits into the far future.

For the New England Farmer.

FARMERS' HOMES AND CHILDREN.

I have just been reading H. C. Merriam's article on the "Profits of Farming." I like it, because it speaks boldly and freely; let us look the matter fairly in the face, and seek to understand the case in all its various bearings. My experience of farmers and farming is not great, and therefore my opinions are of very small value, and I only hope they may provoke you to write a good article illustrating my points.

Is not the real cause of continued want of pecuniary success on the part of the farmer, the fact that he does not to any great extent put his brain into his work? May not a farmer think and read as much as any human being ought to do? Must he not do so in order to cultivate profitably? And yet how much of their work seems to be done without any forethought. My farming neighbors cart out their manure in the fall and winter, because they have time then, and leave it in straggling heaps on their land, uncovered, for the earth being then frozen, they can't use that to protect it from bleaching, and the deodorizing effects of sun, wind and rain. Now would not that manure, if kept in the barn-cellar until spring, and worked over by hogs, be worth about twice as much, so that they could save half the cost of moving it? Tradesmen, mechanics, merchants, all have to work their heads pretty hard as well as their hands; why should not the rule apply also to the farmer? Can he, by any other means, expect to see his calling raised to the noble dignity of a science?

Is it not generally the case that the boys with the most active intellects grow weary of the farm, and go to the cities, leaving only the slower and more obtuse minds to carry on the farming, and would not this cease to be so if the farmer employed his mind more, and so kept the active mind of the brighter one fully employed? Does not the boy compelled by any circumstances to remain on the farm, accept the doom somewhat as the criminal accepts his sentence—because he can't help it—and do you expect him to make any progress with such feelings? As he follows his plow from year to year, does he not spend more of his time in thinking of the many pleasures and lighter labors of his city brother, than he does in carefully and laboriously considering how to make his farm pay better? I say thinking laboriously, for no good comes of anything short of real labor, whether of hand or brain; light and transient thought will do him little good. In order to be able to think more, he must work his body less severely, and the result of applying his mind to his business will be, more time and ability to think. We must not expect to amend this evil in a moment, but we can, at least, begin at once. Let every farmer do more to induce his brightest

boys to stop on the farm and give them early a few of the superfluous acres that are now idle or half cultivated, which is worse than idle; induce them to plant this land with fruit and other trees, with a view, one day, of having their home upon it, and they will find it hard to leave such pleasant places.

But there is another side to this picture. Let us look at it. Every farmer's son who goes to the city does not turn out an Amos Lawrence; nine out of every ten fail, and ultimately die in hopeless poverty or in debt, which they don't try to pay, because that would deprive them of the means of living easily. How many of them struggle on for years and years on a scanty salary, and die without ever being able to command their own time; and then look at that host of young men in cities who spend their evenings in dram-shops and gambling houses, and their nights in places not to be named. Is it not worth something to escape the strong and often too powerful temptations to such things as these? I think it is within the truth when I say one-fourth of all the young men from the country are drawn in by these terrible vices; they don't all go down in open sight, but how many are scarred all over by their sins, and still live along with a decent show of respectability. Let any city man look back forty years and see how his pathway is strewed with the wrecks of his acquaintances. Now I ask country fathers, and especially country mothers, if they wish their sons to run this great risk for the sake of more money than they really need? If not, then let them make their home so pleasant that they can't be hired to leave it. The temptations to cheat in order to get rich are greater in trade than elsewhere; then let us pause before we place our sons in the way of such strong temptation to coin their souls into dollars, a risk to me as fearful as the others. Let farmers think more and their labors will be lighter—use their brains more and their hands less. X.

A VALUABLE PAINT.

For the information of all who are wishing to obtain a cheap and valuable paint for buildings, I would say, take common clay, (the same that our common bricks are made of,) dry, pulverize, and run it through a sieve, and mix with linseed oil. You then have a first rate fire-proof paint, of a delicate drab color. Put on as thick as practicable. If any one has doubts with regard to the above, just try it on a small scale—paint a shingle and let it dry. Recollect that it must be mixed thicker than common paints.

The clay, when first dug, will soon dry, spread it in the air under a shelter, or, if wanted immediately, it may be dried in a kettle over a fire. When dry, it will be in lumps, and can be pulverized by placing an iron kettle a few inches in the ground, containing the clay, and pounding it with the end of a billet of hard wood, three inches in diameter, three feet long, the lower end to be a little rounded. Then sift it.

Any clay will make paint, but the colors may differ, which can easily be ascertained by trying them on a small scale as above indicated. By burning the clay slightly, you will get a light red, and the greater the heat you subject it to, the brighter or deeper red.—*Country Gentleman.*

For the New England Farmer.

FEEDING CATTLE.

[Read before the Groton Farmers' and Mechanics' Club, Feb. 6, 1860, by GEORGE S. BOUTWELL.]

It is now the fourth winter that I have fed my milch cows upon cooked food. The food generally consists of the husks and stalks of corn, barley or cut straw, meal, (corn and cobs ground together,) shorts, and rice meal, mixed with boiling water, and allowed to stand from nine to twelve hours before it is given to the cattle. I am now feeding together fifteen cows, three yearlings, and one calf ten months old. I consider the nineteen equal to eighteen cows, and their daily allowance of food is as follows:

168 pounds of husks and barley straw, at $8 per ton	.67
1 bush. shorts, 25c, ½ bush. cob meal, 28c	.53
½ bush. rice meal, 25c, 2 bush. mangold wurtzel, 40	.65
100 lbs. hay, at $15	.75
18)	$2,60
Daily expense per cow	14 4-9

In this statement no account is made of the fuel used or the labor of tending the cattle, the manure being ample remuneration therefor. The hay is fed dry, and the roots are given at noon. It is to be observed, in forming an opinion of the economy of feeding cattle in the manner above described, that the fifteen cows are giving milk, many of them feeding liberally, and that they consequently consume more food than cows which are not kept for that purpose. It is to be observed, also, that the husks are estimated at a price far above their saleable value, and far above the return that they yield to farmers who feed them dry and long. The cost per day, 14 4-9 cents, would purchase about 19½ pounds of hay at fifteen dollars per ton, and this amount will support a cow, but her yield of milk upon hay alone will be very small. According to the foregoing estimate, a cow that gives a trifle more than half a can of milk per day will support herself; and good cows will do more than this. I have a cow that gave from the 16th of April, 1859, to Dec. 20, 1859, 259 days, an average of 21⅞ pounds of milk per day, or 280½ cans in that period of time. Her yield for the year will be at least 300 cans, which, at 22½ cents, the average price, will amount to $67,50. The cost of keeping may be estimated as follows:

For 180 days, at 14 4-9 cents per day	$26,00	
For 185 days, at 7 cents per day	12,95	
For rent of barn	5,00	$43,95
Yield for the year		67,50
Profit		$23,55

I may also mention a heifer, three years old, grade one-half Ayrshire, that dropped her calf March 30th, 1859, and that, by the 30th of March, 1860, will have given 275 cans of milk. These are among the best milkers, but the poorest of my stock will yield 200 cans. I mention these facts to show that the food described is adapted to produce milk. I am quite confident that but few cows will yield two hundred cans per year when fed upon dry hay in the winter, and I am also confident that farmers generally overestimate the milk-giving properties of their cows. For a few weeks in the summer the daily yield is very large, and the estimate is based in good degree upon that, while in fact there are nine months when the country

is materially less. The quantity and kind of food described are not only productive of milk, but cows usually gain flesh during the winter, nor is there any perceptible weakening of the system. The heifer mentioned has been kept upon cooked food every winter. The cow has been so kept three years, and they are large and apparently healthy. I have never seen any ill effects from the course pursued.

By the process which I have adopted I am able to get a return from the corn stalks equal to the return from an equal weight of hay. At the present price of milk and hay, I think it is impossible to sell milk and get pay for the hay consumed by the cows; but by feeding upon stalks and straw, these articles yield a return which could not be obtained in any other way. Every farmer ought to consume as much hay and grain as he produces. There may be deviations from this rule occasionally when these articles command high prices, but compensation ought to be made by purchasing when prices are low.

The object sought is to feed out all the crops, and obtain as much money as could be obtained by sending it away. This can not be done by raising cattle for sale, but it may be advantageous to raise cows for milk, as, if proper measures be taken, good ones may be bred with considerable certainty. A farmer cannot afford to buy cows that have been tested and proved, as the prices are too high; nor can he usually afford to buy cheap animals, and run the risk of finding only one in two or one in three that he desires to keep.

The root crops may be made the basis of improvements in agriculture. My limited experience leads me to think that the mangold wurtzel is a profitable crop. The culture is easy and the product large. The land should be thoroughly and deeply tilled and well drained. A heavy, clayey soil is unfavorable. The land should be well manured and kept clean. A young man, John Tynan, of the age of eighteen years only, a pupil in the Albert National Agricultural Institution, Glasnevin, Dublin, Ireland, has prepared a prize essay upon the mangold wurtzel, and it is not too much to say that it is not only the best essay upon the subject in hand, but it is a model for imitation by those who write upon agricultural topics. It has been reprinted in the Transactions of the Massachusetts Society for Promoting Agriculture, and it may be read with profit by any farmer of the country. The experiments made upon the Albert Farm and cited by Mr. Tynan show that the mangold is superior to any other root for its fattening properties, and for its milk-producing qualities. The yield to the acre is also large, being, at the maximum, about thirty-two tons. Salt seems to be a specific manure for the mangold, the crop having been materially increased by its use. In one experiment, the treatment was varied by the addition of 5 cwt. of salt, at a cost of about two dollars, and the crop was increased from 23 4-5 to 30 3-5 tons to the acre. In twelve experiments, the largest crop of 30 3-5 tons was obtained by the use of 4½ cords of manure, 4 cwt. of guano and 5 cwt. of salt to the acre. The manure was estimated to cost $31,37, or a fraction over $1 per ton of roots. Another acre, which yielded 20 3-10 tons, was manured with 2 cwt. guano, 2 cwt. of superphosphate, 2 cwt. of nitrophosphate and 2 cwt. of salt at a cost of $13,50, or 66½ cents per ton. In another experiment, the same articles were used, two-thirds of the quantity of each being taken, and the result was a crop of 19 11-20 tons, at a cost for manure of 46 cents per ton. Another acre, manured with guano only, at the rate of 7½ cwt. per acre, yielded 17 17-20 tons, at a cost of $1,26 per ton for manure. I find, upon examination, that the charges for manures at Glasnevin correspond so nearly with the cost in this country that the difference need not be considered. The expense of labor is not given by Mr. Tynan, but if we assume it to be fifty dollars per acre, the entire cost will be about eighty dollars. A full crop of thirty tons would give a cost of $2,67 per ton. With ordinary culture, my own product, in 1859, was at the rate of more than twenty tons per acre. It may safely be assumed that mangold wurtzel may be raised at a cost of three, four and five dollars per ton, according to circumstances, and at the highest rate they are a cheaper food for cattle than hay or grain. It is thus seen that mangolds are produced at a cost not exceeding 10 cents per bushel, while in my statement of the expense of keeping cows I have estimated them at twice that sum. Every farmer will do well to raise a ton for every two animals that he intends to feed during the winter, whether fat cattle, stores or milch cows.

It is generally understood, however, that the mangold does not attain perfection before January, but it may be kept until the 10th of May, or even till the 1st of June.

If the view I have taken be correct, the thought may occur to some that we have underestimated the value of Indian corn as a profitable crop. And so I think we have. It is the only crop that, in cases of extremity, and often as a matter of convenience or profit, may be used as a substitute for every other. If properly manured and cultivated, it may be raised upon every soil, and not once in twenty years, in this climate, is there a total failure. It will sustain man and beast, and it is, as an article of constant use, more palatable and healthful than the smaller grains. When fully ripe, it will endure the severities of the climate, and the husbandman may allow it to remain in the field without fear of loss, while wheat, barley and oats must be gathered at maturity, or serious results will follow. The stalks, when green, are among the best articles for soiling cattle, and, when dry, their value is equal to a third of the cost of the entire crop. May it not then be wise for farmers to give more attention to the culture of roots and Indian corn for the sustenance of their own herds, and if anything is sent to market, let it be hay, which usually bears a price disproportionate to its nutritive value?

THE CROW.

In an article on winter birds, we have this defence in the *Atlantic Monthly*: "He consumes in the year vast quantities of grubs, worms, and noxious vermin; he is a valuable scavenger, and clears the land of offensive masses of deceased animal substances; he hunts the grain fields, and pulls out and devours the underground caterpillars, whenever he perceives the signs of their operations, as evinced by the wilted stalks; he destroys mice, young rats, lizards, and the serpent; lastly, he is a vigilant sentinel about the farm-

and drives the hawk from its enclosure, thus preventing greater mischief than that of which he himself is guilty. It is chiefly during seed time and harvest that the depredations of the crow are committed; during the remainder of the year, we witness only his services, and so highly are these services appreciated by those who have written of birds, that I cannot name an ornithologist who does not plead in his behalf."

INCREASING INTEREST IN AGRICULTURE.

Agricultural revival—Circulation of Agricultural papers—Matters forty years ago contrasted with the present—Books—Let the boys and girls go who seem determined to leave the farm—Contact with the rough world will send them back.

A FEW weeks since, we alluded to some of the evidences or results of an increased interest in agricultural pursuits which we had noticed in our recent visits to several towns in our Commonwealth. The agricultural revival, as we then called this new interest in the cultivation of the soil, is by no means confined to our own State. It pervades the whole country. Perhaps there is no more satisfactory indications of its extent and intensity, than that furnished by the Exchanges which lie upon our editorial table. Within our recollection there were, we believe, but two papers devoted to agriculture published in the United States: the old *New England Farmer* in Boston, and the *American Farmer* in Baltimore. And even these worthy pioneers, these able heralds of a better time coming, were coolly received and poorly sustained. With the genius and wit of a FESSENDEN, and the earnest common sense and wise foresight of a SKINNER, the combined circulation of these two journals never reached as many hundreds as that of several of the agricultural papers before us now counts in thousands—and we are not sure that we might not add another cipher, and say that some farmers' papers of 1860 publish more *tens of thousands* of copies than these pioneer papers ever did hundreds. But we cannot stop to hunt up statistics. Forty years ago, then, it is very near the truth to say, there were no agricultural papers, no agricultural books, and consequently no agricultural reading. The man who settled upon a piece of land wrought out, as far as he could, his own idea of a farm. His modes and his practice and his implements were such as were common to the neighborhood, varied slightly by his own taste, skill and judgment. Virtually he stood alone. His labor was solitary—his business lonesome. He worked and experimented by and for himself.

But now, with more agricultural papers than we have States in the Union, the humblest tiller of the soil feels the happy influence of companionship with a host of peers and fellows in the common work of progress and improvement. Thousands may be waiting for the results of his experiments in the most solitary corner of his out-of-the-way farm. A noble band of brothers, these readers and contributors of agricultural papers. Social, sympathetic, united! Well may we congratulate ourselves on such an interesting revival of agricultural interest among the people of our whole country—East, West, North and South.

But if the number of the papers devoted to the interest of the farmer, which are now read and supported by farmers, may be cited with hopefulness and exultation, surely the talent and ability which are displayed in their management may be regarded with the highest degree of satisfaction.

We might also refer to books on agriculture, which are swelling our libraries to a size that is fast assuming the solid proportions of the libraries of *the professions*—the great secret of their respectability and attractions—and to the labor-saving implements, which do the work of menials and slaves, greatly relieving the severity of our toil, but we do not propose to do so at the present time.

We have already run on with these remarks till we have hardly space left for the announcement of the object, or idea, of this article.

In view of this increasing interest in agricultural pursuits, we wish to suggest that, in our opinion, greater freedom may be extended to farmers' sons and daughters in the choice of a profession. For ourselves, we are ready to sign a proclamation that, henceforth, every one who desires to do so may leave the farm and the farm-house, forthwith!

As the business of agriculture now stands, there is little hope of success by any of those sick of home, victims of fate plodders, who believe they were made for mechanics, merchants, peddlers, preachers, politicians or fiddlers. All these classes are wanted, but not on the farm. In the late discussion of the question, "What will tend to make farming pleasant and profitable as a pursuit?" by the Legislative Agricultural Society, it was well suggested that a love of the business is essential. People must take hold of it from choice, and voluntarily devote to it the best energies of their minds and bodies, or the business will not be either pleasant or profitable.

Who has not often remarked, that, among the strange whims of our common humanity, there is a dispositiou to do those things which it has been forbidden to do, and to leave undone those things which it has been most persistently advised and exhorted to do. Recognizing this as a well-

known, but often neglected principle of human nature, we do honestly believe there is danger that the advice to farmers' sons to stick to the farms may be too frequently repeated. Certainly there is such danger, if those whom we seek to influence by our advice see, or think they see, either in the frequency, or in the manner of our admonitions, anything that has the appearance of coercion, or of an attempt to interfere with the freedom of individual action. In the choice of a profession and of a wife, young America brooks no dictation. He may possibly bear advice of the simplest kind on either point; but if he mistrusts that there is a particle of compulsion in its composition, it will be rejected, though by doing so, he should be forced to act against his own convictions of duty and policy. Under the influence of this dogged wilfulness, mistaken for independence, many leave the farm, resolutely determined not to return, and with that determination so positively and repeatedly expressed, that they are ashamed to return when fully satisfied that such is their wisest course. With them, exclusive familiarity all their lives with the business of farming, has bred a hearty contempt, while distance has given enchantment to the view of other occupations. Among our personal acquaintances many of the most contented and successful farmers are those who have, by personal experience or observation, had the best opportunities of contrasting the advantages and disadvantages of the various trades and professions with those of agriculture.

For the New England Farmer.

AROOSTOOK COUNTY, ME.

The *Farmer* for Mechanics—Soil of Aroostook—Limestone—Surface Undulating—Growth of Timber on High and Low Lands—Grain Crops, Oats, Wheat and Buckwheat—Corn—Buckwheat Straw Injurious to Pigs and Young Stock—Laying New Shingles on Old Ones.

I like the *Farmer* very much; although I am a mechanic, and my farming is limited to a small garden, yet I find much information profitable to nearly all classes.

Aroostook is a large and extensive county, with a rich and fertile soil, exceeding anything this side of the far west. The soil is of a limestone formation, a ledge of it underlying nearly the whole country, from two to six feet deep from the surface.

The surface is not rough, neither is it a dead level, but undulating, or lying in swells. The growth on high lands is beech, birch and maple; in the valleys, fir, cedar and spruce. There is very little waste land in comparison to other parts of the State. The crops average larger here than any other place I have been acquainted with. Oats average from forty to fifty bushels per acre, although one hundred are sometimes raised. One of my neighbors in 1858 raised from four acres 382 bushels, averaging 35½ pounds to the bushel. 20 bushels of wheat per acre is an average, and everything else except corn in proportion. I do not think the soil suits corn so well as it does other crops; corn is raised, but not to great extent. There is no end scarcely to buckwheat—it is very extensively grown; some farmers raise two thousand bushels, and not one in twenty but raises one hundred.

Some time last year I saw an inquiry in the *Farmer* as to whether buckwheat straw was injurious for stock to live on, and as I have never seen an answer I would say that it is injurious to young pigs, and if they lay in it, it will set them crazy, and they will finally die. It is hurtful to hogs and young stock to run through it when green, making their head and ears sore and itch very much.

I saw a suggestion the other day in the *Farmer* about laying new shingles upon old ones: that is practiced here, but we lay a coat of lime mortar on the old shingles and put the new ones on while the mortar is soft. This makes it safer on account of fire.

J. A. HUBBARD.

Hodgdon, Me.

For the New England Farmer.

THOUGHTS SUGGESTED BY MAY NUMBER OF N. E. FARMER.

Page 202—*Hungarian Grass.*—After reading dozens, yea scores, of reports in reference to the yield, value, uses and superior advantages of the crop which is variously designated as millet, Hungarian grass, German millet, Egyptian millet, &c., and after examining a large number of specimens of the seeds sold or held under some of the above names, (as also under the name of "Honey Blade,") together with some of the plants grown from these seeds, I have come to the conclusion that they are all of one genus or species, botanically, and that, in common farmer phraseology, it would be proper and of some advantage to speak of them all as *varieties* of millet. We have a great many varieties of oats and of wheat and of corn, and as it is absolutely necessary in some cases, and of advantage in almost all, when speaking of these grains, to designate the particular kind or variety concerning which you may be making such or such an assertion,—as there would be great confusion, misunderstandings, and contradictions, without such particularizing of the kind or variety spoken of,—so is it now as to the different varieties of millet. They are not accurately distinguished, nay, they are supposed by many to be entirely different kinds of plants, and both seeds and plants of different kinds pass current under the name of Hungarian grass. From these causes we have much want of clearness in our descriptions and our apprehensions of what is said or written about the subject. It would, therefore, be a great advantage if some one would do for the *varieties* of millet, what has been done for the similar varieties or kinds of wheat, oats, corn, &c., and of apples, pears, cherries, &c.

I have been led to the train of thought which is outlined in the foregoing remarks, partly in consequence of repeated proofs in agricultural publications, and in talks with farmers, that the majority are ignorant of the fact that Hungarian grass, honey-blade grass, &c., are nothing more than new names for a grain long known as millet, or for a mere variety of the same, and partly in consequence of an attempt, in the article under no-

tice, to base a distinction between Hungarian grass and common millet, on what seems no more a characteristic of any *special variety* in millet than the stiffness of the straw or the mode and amount of tillering are characteristic of any general or essential difference in wheat. The writer says, "this grass never grows too large and stiff, like millet, but each seed throws up from the root, in anything like fair ground, from one to five or ten stalks, and sometimes in rich land, sowed thin, from ten to fifty of about equal size, each covered with its own beautiful blades, and when ripe, a heavy head." Let those who grow millet of any kind this season make observations as to this and other, real or supposed, distinctions between kinds passing under different names. Numerous observations are yet needed to establish the truth and put down the errors or misapprehensions in regard to this old, but recently revived and improved crop.

It is not intended in anything I have said that the varieties of millet introduced into this country from other countries, known as German, Hungarian, Italian, Egyptian or other millets, are not superior to our old or common millet. The discriminating reader will perceive that the contrary of this is implied throughout. But it is intended that all these, and especially Hungarian grass, are nothing more than varieties of millet, and not, as many seem to think, plants essentially or generically different, and that, to prevent misapprehension, these varieties should be made the subjects of discrimination more than they have been.

Page 204—*Legislative Agricultural Meeting.*—In the attempts made by the several speakers to decide what are the most profitable crops to raise on Massachusetts farms, some things were said which would be of value to almost every cultivator of the soil in that State, as well as in many others, and which went to show that different men have different ideas or experiences as to what are the most profitable crops, at least for themselves. And the only shape in which the question discussed can be satisfactorily or usefully decided, is when each individual decides it for himself, the local advantages, or disadvantages, and other circumstances of different farmers, rendering it impossible that any one system of cropping can be the most profitable for *all*. And if each individual would thoroughly consider and judiciously decide, every year, what crops it would be most profitable for *him* to raise, I am inclined to think that many would find time thus spent in head-work as profitable as that spent in any kind of hand-work. In determining what crops I can most profitably raise, I must take, as every one must, many things into consideration, such as the amount of the manure on hand, the peculiarities of the markets most accessible, the price of help, &c., &c. Among the many considerations which should have an influence on my decision, there is one to which I would give more weight than to almost any other, namely, this, that, as a general rule, *those crops are the most profitable* which can be *consumed upon the farm* and converted into such marketable articles as milk, wool, butter, cheese, meal, live stock, &c. Whatever crops can be made to produce the greatest amount of these articles, and leave behind them the most valuable manure, are surely the most profitable in *the long run;* and as M. P. has suggested in his article on page 211, it is more economical to feed not only the more bulky articles but even grain, to stock upon the farm, if we can obtain a return of only 80 per cent. of the cash or market value of these articles, than to carry them off to market. The manure is worth the difference.

Page 206—*The True Object of Farming.*—This article, abounding in suggestions well deserving of serious consideration, might have been, perhaps, more appropriately headed, or titled thus: How Farming may be made a more Ennobling Pursuit. And if the methods here recommended for making farming more ennobling and dignifying in its influence upon those engaged in it were habitually held in remembrance, and adopted in daily life, there would be among us, even among those in lowly life, more true *noblemen* than there are of men, so called, among all the titled aristocrats and large land-holders of the sea-girt isle. If a farmer, in virtue of a serious consideration of the thoughts here presented to his attention, were to resolve to aim at the several objects mentioned, and to consider them habitually as of *more importance* than making money,—if he were to resolve to conduct all his operations on his farm as God's steward and co-worker, and to find out what method of management secured the largest amount of His smile and approval, as evidenced in His causing the largest returns from that method,—if he would resolve to make himself ever better and better acquainted with God's great book of Nature ever open before him,—if he were to resolve to make his home and its surroundings as full of gratifications for the sense of beauty as God has made the fields, and all the works of His hands,—if he were to resolve to make all things in his pursuits and in his communion with Nature's author contribute as much as possible to educate, enrich and exalt the minds of his children,—and if, finally, he were to resolve that in all his dealings with his fellow-men, he would do to them as he would that they should do to him, and that this golden rule of action should be extended even to his feeding, working, management and care of the animals committed to his charge, what a *nobleman* would he be! Surely it cannot be accounted presumptuous or at all inappropriate to add here, that when such a farmer shall be called away from his sphere of duty, labor and privilege here, to another province in God's illimitable universe, he will receive a plaudit of "Well done, good and faithful servant," and be assured that as he has been faithful and wise in his administration of a few things he will now be advanced to be ruler over many things.

Page 213—*Carrot Juice in Butter.*—Judging by specimens of butter we have seen and eaten of for several winters, I should say that the man or woman would be weak and foolish indeed who would wish any better color in winter butter than that which good feeding and care, and especially, perhaps, a good amount of clover hay, is capable of imparting. And if the carrot or clover juice is not put *inside the cow*, we are quite sure that, though any desired *color* may be obtained by doctoring or dyeing the butter, yet the good, rich relish and flavor of butter made from a well-fed cow can never be had by any artificial means whatever.

MORE ANON.

For the New England Farmer.

A GOOD HEIFER.

In the autumn of 1858, having on hand the stover from half an acre of corn, I purchased from a drove a small two-year-old heifer, paying seventeen dollars for her. The corn fodder, with a little salt hay, wintered her through. On the first of May, 1858, she dropped her first calf. When four weeks old it weighed, after being dressed, 80 pounds. During the month of June, with nothing save her pasture feed, she averaged 18 quarts, wine measure, per day. In July the drought, shortening her supply of feed, she shrank to 17 quarts per day. In August, dry weather continuing, she fell away an additional quart. In September, I began to feed her with corn stalks, and she averaged 15 quarts per day. In October, without fall feed for second crop hay, she averaged 14 quarts per day. In November, 13 quarts. In January, February, March and April she averaged quite 10 quarts per day.

The past winter she has been kept upon swale hay, with about four quarts of shorts per day.

Assuming that while the calf was with her she gave 17 quarts per day, her first year's lactation amounts to,

May	527 qts.	December	372 qts.
June	540 "	January	310 "
July	527 "	February	290 "
August	496 "	March	310 "
September	450 "	April	300 "
October	434 "		
November	390 "		4946 qts.

Which, at four cents per quart, what it has readily brought at the door, except what was consumed in my own family, amounts to $197,84.

The cost of wintering the first winter I roundly estimate at $15.

Wintering	$15
Pasturing	7
Past winter	25
First cost	17
Amounting to	$64

I have been offered, and refused $75 for her this spring. She is expected to drop her second calf late in the coming summer.

Increased value, $58; added to the income of the first year, making $255,84. Deducting the cost of keeping for one and a half years, with the first outlay, making $64, from the year's income, with the increased value, leaves a net profit of $191,84.

Those making use of her milk consider it of superior quality. H. M. COUCH.

Georgetown, May 8.

EFFECTS OF SOAKING SEEDS IN CHEMICAL SOLUTIONS.

The following is an extract from the Transactions of the Highland Agricultural Society:

"I steeped the seeds of the various specimens exhibited, in sulphate, nitrate and muriate of ammonia, in nitrate of soda and potash, and in combinations of these; and in all cases, the results were highly favorable. For example, seeds of wheat steeped in sulphate of ammonia on the fifth of July, had by the tenth of August, tillered nine, ten and eleven stems of nearly equal vigor; while seeds of the same sample, unsoaked and sown at the same time, in the same soil, had not tillered into more than two, three, and four stems. I prepared the various mixtures, from the above specified salts, exactly neutralized, and then added from eight to twelve measures of water. The time of steeping varied from fifty to ninety-four hours, at a temperature of 60 degrees Fahrenheit. I found, however, that barley does not succeed so well if steeped beyond sixty hours. Rye grass and other graniferous seeds, do with steeping from sixteen to twenty hours, and clovers from eight to ten, but not more; for being bilobate, they are apt to swell too much and burst. The very superior specimen of tall oats, averaging 160 grains on each stem, and eight available stems for each seed, were prepared from sulphate of ammonia; they had an average of thirty-four grains in the ear. The other specimens of oats, which were next the most prolific, were from muriate of ammonia; and the promiscuous specimens of oats were from the nitrate of soda and potash—strong, numerous in stems, (some having not less than fifty-two,) but not so tall as either those from the sulphate or muriate of ammonia."

For the New England Farmer.

IS FARMING PROFITABLE?

MR. EDITOR:—Sometime since I was much interested in an article in the *Farmer*, by your correspondent T. J. Pinkham, of Chelmsford, headed, "How to Reckon the Cost of Farm Products." I am glad he wrote it, for I believe it will result in good to farmers. I recommend to all farmers the practice of keeping a debt and credit account with their farms in general, and with particular crops, stock, &c., that they may be reliably informed in regard to the cost of whatever they produce. One reason, doubtless, why farmers know so little definitely in regard to the cost of a bushel of grain, or potatoes, or of a ton of hay, and consequently of their stock, is the fact of the changeable character of our climate.

I recognize Mr. Pinkham as the author of an article entitled "Does Farming Pay?" on page 447 of Vol. XI. of the monthly *Farmer*, to which I replied on page 533 of the same volume, under the same heading. At first I supposed him hardly in earnest, and was surprised to find a bold endorser at the end of the article. But finding friend P. quite candid, and really in earnest in his remarks, in which he seems to figure so as to well sustain his position, I hope he will pardon me for being bold to review his last article on the subject, on page 562 of the monthly, to which I hope the reader will refer. That it costs much more to cultivate an acre of corn on some kinds of land than on others, even sometimes double, I admit; and on the first reading, his estimate seems a somewhat plausible one, but after carefully re-reading it several times, and criticizing, I obtained a different view. His bill of cost for cultivating up to September, is a fair one for some soils, under the method pursued—high enough for almost any, and very high for soils of easy culture. In regard to his ten loads of manure, however, if he charges it all to the corn crop, there may be a deduction of five dollars, only one-half the cost of the manure being generally charged to the first crop, and if the land be a stiff, green

ward, such as would require two yoke of oxen to plow, the corn would be likely to receive still less benefit from the manure, in which case, the chief fertilizing effect of the manure would be seen in the crops that follow the corn.

In the matter of harvesting, a fine saving can be made in his items of cost, the common price per acre for cutting up corn at the roots, and stooking, in these parts, being one dollar, though sometimes a dollar and a quarter to a dollar and a half is paid for cutting very stout corn—a saving of 25 to 50 per cent., on P.'s cost of merely topping the corn, or cutting the stalks. Some men will cut up and stook from one to two acres of corn a day, depending upon its size; by the way, quite a gain over the old method of topping the stalk and picking the corn. Two dollars is ample renumeration for husking; and in regard to shelling, I will mention that I was one of three men who shelled in one day, the present year, corn that measured one hundred and twenty bushels after it was shelled and winnowed—in ten hours' time—at a cost of not more than three dollars, or seventy-five cents for thirty bushels; and as to marketing, it may be sold when at town on other business, in part at least, and delivered at any distance less than ten miles, for two dollars. So, in fact, without going further into particulars, I find there may be ordinarily—I do not intend to adopt the minimum extreme in my prices—a saving of ten dollars in cultivating the crop, and five dollars off from the manure, reduces the charge of expenses from forty-seven dollars to thirty-two dollars, giving five dollars clear profits on the acre of corn, or a return of sixteen per cent. on the capital invested, after deducting for interest, taxes, rents, &c., in short, all that is chargeable to the crop, and allowing two yoke of oxen to plow the ground, which is not the general custom, and adds to the expense.

The planting may be done by hand at a cost of seventy-five cents an acre, or with a corn-planter, by horse power, at even less expense, when some fertilizer may be dropped in the hill, with only the additional cost of the fertilizer, instead of two dollars and a half, as Mr. P. has it, which would still lessen the cost of the crop, and makes the profit on the capital employed equal 22.5 per cent. In short, he seems to have taken a rather stubborn piece of soil, and adopted (what would be considered in this section) an expensive mode of cultivation, though he remarks that "it will be seen that we have cultivated our crop in the most prudent and economical manner."

A farmer living but a few miles from here, is reported to have recently stated that he had raised the present year an acre of corn at a cost, in labor, of ten dollars and fifty cents, and had once raised seven hundred bushels of corn on fourteen acres of land, manured broad-cast. The cost of raising the premium corn crops that are reported in Agricultural Transactions, that generally range from seventy-five to one hundred bushels to the acre, and where the land is manured heavily, is generally but little more than thirty dollars per acre, and sometimes a little less than thirty.

And here let me add a statement concerning the cost of raising a crop of corn on some of the plain lands of Massachusetts, which are of easy culture, and generally cultivated without manure, according to the philosophy your correspondent recommends in the remarks that follow his statement of the expense of corn raising, (top of second column on page 563.)

One Acre of Corn.	Dr.
Plowing and harrowing	$2,50
Planting and seeding	75
Hoeing twice	3,00
Cutting up and stooking	1,00
Carting, husking, stacking fodder, &c.	3,00
Shelling, delivering to market, &c.	1,75
Interest on land, taxes, &c., &c.	1,50—$13,50
Value of Same.	
Twenty bushels of corn	$20,00
Fodder, &c.	5,00—$25,00
Net profit	$11,50

instead of sinking ten dollars (or 21.5 per cent. on the capital invested,) as a dead loss, as in Mr. Pinkham's statement. And he further remarked that, in his opinion, "there are but comparatively few acres of corn planted in this State, but what run the owner in debt more than this has!" and adds, in all gravity, "what is true in regard to this crop is true of most others; only much more so, (?) for aside from the hay crop, the corn is the most reliable, as it is the most important upon the farm." How, then, in the name of common sense, is it that hundreds and thousands of farmers in New England, and in this State, even, whose only income is from their farm products, manage to get along a whole life-time without becoming bankrupts? Indeed, if P.'s statements are correct, farming is a *remarkably disastrous* business, and any man who will follow it, must be *remarkably stupid!* I fear that, after all, the facts are against friend P., for if such a state of things obtains in his vicinity, the case cannot be general. And I can assure him that hundreds of bushels of corn are raised in this section of the State, at a cost not exceeding the above, and which often net the cultivator a higher per cent. of profit. Fifty bushels per acre have been taken from these soils, without manure, when first subdued from their natural state.

In regard to the net profits on the corn crop, where manure is applied, I will refer Mr. Pinkham, and the reader, to agricultural reports on premium crops of corn, where the per cent. of profit is given as high as fifty to one hundred, which, if these are not fair premises to judge from, at least show what the farmer may do by judicious management.

I find a paragraph in the address of Gov. Washburn, delivered in 1858, before the Middlesex South Agricultural Society, which may well be quoted in this connection. He says:

"Farming has always seemed to me to be like theories in political economy. You may take your slate and pencil, and sit down and cipher yourself into a good income, or no income at all; you can demonstrate beyond contradiction, that the country is going directly to ruin, by too high or too low a tariff, just according to the data you assume at the start. And yet, in the face of these calculations, the country goes on prospering, and the farmer finds himself better off at the end of the year than at the beginning, though ruined, beyond retrieve, by figures which, it is said, 'do not lie.'"

All farmers, I am sure, do not always realize as good pay as first rate mechanics, who can command great wages and steady employment through-

out the year, but it is often owing to improper attention to their business, or from their being located on stubborn or worn-out farms. But any farmer who has a hundred acres of New England soil at his command, need have no fears of finding a pauper's grave, if he but attends to his business; and if he is not free from debt, he may soon be, if he manages properly, and is industrious.

Let us now look at the figures Mr. Pinkham has given us in reference to the cost of raising calves. Here (I do not speak of elsewhere) the hide of a very young calf is worth nothing, for it cannot be sold, except rarely to a "tin peddler," who will pay twenty-five cents "in trade;" but generally a young calf of the native herds will bring one dollar for fattening, or to raise, if a buyer can be found. But $2 94 for tending a calf during the first eight weeks of its existence, five and one-fourth cents a day, seems an enormous charge; and then I can hardly conceive how so young a calf can dispose of a bushel and a half of meal in the same time, about a quart a day, upon an average, for the first two months. He may possibly be made to eat it, but it is much more than is for his good, in connection with its milk. I am raising a calf that is now two weeks old, and I find that the attention he requires, does not occupy more than five minutes a day of any person's time. The milk, I acknowledge, Mr. P. puts down at a very low figure. "To eighteen weeks at grass, at ten cents per week, $1 80." In this part of the country, pasturage can be obtained for yearlings, in their second summer, for eight to ten cents a week; and calves in their first summer, of course, do not consume so much food. "To twenty-six weeks' keeping in barn, at fifty cents per week, $13." This charge, I think, any farmer who has hired stock kept in winter, or has taken stock to keep, will consider much too high. I have known full grown cows, when not in milk, kept for that price. So I think it will not be too much to deduct one-half from Mr. P.'s estimate, which leaves not a high price for a good yearling. But I must confess I do not regard the raising of stock, except under peculiar circumstances, as profitable as many other branches of farming, and think that generally there is but little to be made from it, directly.

In other departments of agriculture, at least in this part of the Connecticut Valley, a "handsome profit, is realized by the farmers, and I know of instances in which they are slowly but surely becoming "before-handed," as it is termed, simply by cultivating farm products.

A gentleman, not very distantly related to the writer, bought a piece of new land, containing fifteen acres, for $165, a few years since, from which pine timber had been cut the previous winter. It was broken up and sowed to rye, yielding two hundred and sixty-four bushels, which was sold at one dollar per bushel, and with the straw, gave a clear profit exceeding considerably the original cost of the land. It was planted the following year with corn, though in an unfavorable condition for a corn crop, and also suffered much from the drought, yielding a fine profit above the cost of the work in raising. I might give other instances, with plenty of vouchers for their truth.

The same farmer, when he commenced business as an agriculturist, ran in debt for his land to the extent of several hundred dollars, some twenty years since, and though having a family to support, has cleared himself of debt, and made extensive improvements in fences, buildings, &c., besides adding, by purchase, some forty acres more to his farm, all of which is now free from debt, with several dollars in surplus funds; and all obtained from the land by the raising of crops, no "outside successes" having been met with, notwithstanding the unprofitableness of farming.

I find that Mr. Pinkham and myself have arrived at very different conclusions in regard to the consequences of farming, while we both may think we have based them upon reliable premises. For my own part, I have endeavored to give correct statements, and for that end have consulted other farmers on many points.

I might extend these remarks much farther, yet I must say, I did not find an answer to the question, "How is it, then, that farmers get along?" which Mr. P. propounds, perceiving it to arise from the view of the matter he has presented, and claims he "can very easily answer," but I have thus far looked in vain for a proper answer.

This subject is one of great importance to the farmer, and it would be interesting to compare facts and opinions in relation to it from different parts of the country. J. A. A.

Springfield, 1860.

For the New England Farmer.

THE POTATO ROT NOT CAUSED BY INSECTS.

Mr. Editor:—When I wrote the article upon this subject, which is now causing so much anxiety and trouble in a certain quarter, I did not know that Mr. Lyman Reed had laid claim to the $10,000 award offered by the State of Massachusetts to the discoverer of the cause and remedy of the potato rot; nor did I know that he had obtained a patent right for his pretended discovery, backed up by a certificate from seventeen members of Congress, who "devoted one whole day in the Agricultural Committee Rooms of the Capitol" in examining into the subject, but who cannot be supposed to know half as much about the subject as seventeen plain, shrewd, common sense Yankee farmers, who have been carefully and critically examining into the subject for the last ten or fifteen years; but I did know that Mr. Alexander Henderson, of New York, had attempted to show that the potato rot was caused by insects. It was not, therefore, against Mr. Lyman Reed's claims and interests that I offered the seven reasons to prove that the potato rot was not, and could not be caused by insects. These seven reasons were the result of careful observation and long experience, and were stated so clearly and forcibly, that even Mr. Reed himself seems to quail before them. Why, otherwise, does he charge me with using "vague generalities" and "hypothetical theories?" I used no vague, or ambiguous expressions, indulged in no new fancies, hypotheses or theories, but stated the simple, naked truth in seven propositions or reasons, which it becomes Mr. Reed as a gentleman and scholar, fairly to meet, and logically to answer. If he feels himself competent to do this, the quicker he does it the better for himself, and for his claims upon the public. John Goldsbury.

Warwick, May 14, 1860.

THE TIME TO CUT GRAIN AND GRASS.

This is an important matter, and one that has not received sufficient attention. Farmers are in the habit of cutting their grain and grass at the most convenient time, and without much regard as to what effect such cutting has upon the weight and nutritive qualities of the crop. They will continue to do this, because they have not bestowed thought or investigation upon the subject, and therefore do not realize the losses which they incur by neglecting to harvest grains and grasses at the proper time. The *reasons* of this loss are so plainly set forth by Mr. ANDERSON, the learned editor of the *Farmers' Journal*, published at Montreal, that we prefer to employ them, to using words of our own. He says that

"Grass, while still green, contains a large amount of starch, gum and sugar. The sugar is perceived in the sweetish taste of the juice; the starch and gum, being nearly tasteless, are not so readily perceived. The principal nourishing ingredients in all kinds of food are starch, gum, sugar, and some nitrogenous compound. But the starch, gum and sugar are mainly changed into hard indigestible woody fibre when grass fully matures. If the ripening process be arrested eight or ten days before its completion, and the plant be dried rapidly, double and treble the amount of starch, gum and sugar will be secured. The same reasoning holds true of all kinds of grain. Every one is familiar with the sweet taste of green corn, wheat in the milk, etc. When the growth is completed, cut these crops and you save a considerable amount of rich nutriment which would otherwise be changed to the woody fibre of the outer shell. The only point to be looked to, is, to wait until the accumulation of juices is completed, and then begin the harvesting at once. The only exception to this rule is with crops designed solely for seed; these may well be left to the natural full ripening upon the stalk, especially when the seed is to be kept long.

The proper time for cutting grasses is at the moment the seed is set, or immediately after the flowering is over. Clover should be cut as soon as in full bloom.

A large number of experiments on wheat and other grains indicate that the proper time for harvesting is when the kernel is fully formed, but still soft enough to yield to a moderate pressure between the thumb nails. This is usually about ten days before maturity."

This reasoning is undoubtedly correct, not only because it is founded on true scientific principles, but also because it is confirmed in an abundance of experience by those who have put the matter to practical test. It would be safe, we think, to say that millions of dollars would be saved to the country annually, if this single item of business of the farm were carefully investigated, and such a practice adopted as the investigation would certainly suggest.

The want of a more accurate knowledge of the business in which he is engaged, of a clearer insight into matters which he cannot comprehend at a glance, is one leading reason why the profits of the farmer do not more constantly meet his expectations. It certainly is not because there is any inherent defect in our soil or climate, or that nature is not generous, even lavish in her favors, but rather that the farmer does not closely observe the wants of the soil, the influence of climate and the effects of depositing seed, gathering crops, or doing many other things at a wrong time, or in an improper manner. He must become a *thinker*, as well as worker, before the profession in which he is engaged will keep pace with the progress of other arts, or afford him that material aid and comfort which he fancies other occupations confer.

In the coming harvest, there will be opportunity for every farmer to test the value of these remarks, by cutting a portion of his grain at that moment when the kernel is fully formed, but so soft that when he presses it between his thumb nails, he can squeeze it to a pulp, and notice a slight milky juice in the mashed mass. Then leave a portion ten or twelve days later, and upon threshing and cleaning up carefully, compare the results. If this course were adopted by one or two intelligent farmers in every neighborhood, and reported to the agricultural papers, it would do much to settle the question and introduce a uniform practice.

To test the value of hay cut early with that cut later, may be a more difficult matter—but still, by weighing portions of the two kinds, and by a critical observation of the manner in which the cattle eat them, and their apparent effects, something may be learned that will be valuable. A pretty fair test would be to lay equal portions of each kind of hay, side by side, in front of the stancheons before the cattle are tied up, and on bringing them to their places, observe whether they make a selection. It would be necessary probably to try this more than once, and if the preference of the cattle were uniform upon one kind of the hay, we should feel tolerably safe in being guided in our practice by their instincts.

We hope experiments will be made and reports sent us that may be published for the benefit of all.

For the New England Farmer.

INOCULATION OF DISEASED CATTLE.

Since it seems evident that the cattle disease is much more extensive and troublesome than at first feared, and that the means taken to prevent its extending farther have failed, as might have been reasonably expected from the first, would it not have been both prudent and wise to have tried inoculation, which has been from the first stated to be effectual, upon those portions of infected, isolated herds, which were not already diseased? Or do our commissioners and veterinary surgeons esteem it their only province to kill? It seems to at least one person, that a far better way would be to forthwith inoculate every one of a herd where the disease makes its appearance. Legislative measures will prove powerless, unless a measure of this kind is resorted to. I have been told, on what I consider good authority, that cattle from a diseased herd, several animals having died from it, of the identical disease now prevalent in Massachusetts, have within a few weeks been sold in

the Philadelphia cattle market, and whether, or how far they may spread the contagion, time only can show; and this fact, among others, shows the propriety of immediate inoculation of the herds where the disease appears. The cattle referred to were not from this State. Killing evidently affords no certain, and hardly a probable relief to the disease. It is not improbable that the disease may be communicated from one herd to another in the clothing of drovers, commissioners, surgeons and attendants of diseased animals.

Boston, May 25, 1860. D.

For the New England Farmer.

LETTER FROM KANSAS.

How to make Hens lay—Cottonwood Trees—Shingles—Forest Trees in Kansas—Wild or Natural Fruits—Preserves.

Mr. Editor:—Last week I was several miles out into the territory, and stopped at night at a cosy log cabin nestling among the timber upon Walnut Creek. The next morning, after breakfast, I was surprised to see my landlady go out, and catching her hens, tie each one's legs together and throw them upon the ground with "There, be good." "What did you do that for?" I asked. "To make 'em lay," she answered. "Make them lay, will that do it?" I inquired. "La, yes," she said, "didn't you ever hearn tell of that before?" I confessed I had not. In about an hour she went out, and picking up the hens, sure enough, some had laid; those she let go, and they ran off, not even cackling their gratitude. But those hens who seemed disposed to be contrary, she struck upon the back, saying, "You'd better lay, you'd better lay, for you won't go till you do," and in a while they, too, had recompensed their mistress for feeding them so bountifully. She says that she does so every morning, and that the hens know well enough that "they have got to lay." So you see even invention lives in Kansas.

But of trees. One of my friends has just cut a cottonwood tree upon his land in the river bottom which measures three feet in diameter, eighty-four feet from the ground. He computed that it would make 800,000 shingles, which at $2 per thousand, nets $1600, and there remains the large top for fire-wood, which is three and four dollars a cord. He bought forty acres of bottom land and paid thirty dollars per acre, a year ago. His land is thickly covered with such large trees. Five years ago such timbered land could be had by "squatting" upon it; now it is worth fifty dollars an acre, and cannot be got for that. Every owner knows how valuable his land is, since civilization is marching through our forests to erect villages over fallen trunks and upon our Western prairies.

The cottonwood is an inhabitant of the whole Mississippi Valley. It derives its name from the blossom, which flowers out like cotton. The seed is so natural in the territory that if a piece of newly-plowed ground is allowed to remain uncultivated a year, young cottonwoods spring up all over it. The trees run up like an arrow to the height of eighty or one hundred feet, and branch out at the top large and full. The leaves are full and shiny. The trunks grow sometimes very large. Not far from our house is one tree measuring ten feet in diameter. The young trees make excellent flag-staffs, so straight and stout. Mulberry trees are also abundant, which make the most durable posts, and burn as well green as dry; oak, black walnut, hickory, ash, hackberry, which is the best for wagons, pecan and sycamores are also abundant.

In their season, we have plenty of wild fruits in Kansas, which is very gratifying to us Yankee preserve lovers in this new land of barren orchards, and, perspectively seen, cultivated fruit trees: wild grapes, plums, elderberries, mulberries, strawberries, blackberries, black raspberries or thimbleberries, gooseberries, wild cherries, ground cherries, crab apples, pawpaws, and other fruits, the names of which I cannot now remember. So, if we do give up the orchards of New England, Nature does as well as she can for us here. Many of the people that have been brought up in the woods do not even know how to preserve fruits for winter, and swear at "those Yankees" who are always scouring the woods and "getting their winter's living out of them." They had much rather let the fruit decay on the bushes than have us "Yankees" teach them how to preserve them!

Susie Vogl.

For the New England Farmer.

ANALYSIS OF THE GARDEN RHUBARB.

Mr. Editor,—*Dear Sir:*—Perhaps a chemical analysis of the leaf stalks of the garden rhubarb, *(Rheum Rhaponticum,)* may not be unacceptable to the readers of your paper, and I therefore take the liberty of sending to you the results of my analyses of the juice of this plant made June, 1859, and May, 1860.

The leaf stalks of the rhubarb when pressed yield 90 per cent. of juice, and leave 10 per cent. of cellulose and fibrous matter.

One thousand grains of this juice, after filtration through paper, on being evaporated in a water-bath to dryness, yield 31 grains of solid matter. This burned gives 3.3 grains of ashes, or saline ingredients, which consist of

	Grains.
Potash	1.717
Phosphate of lime	0.350
Lime	0.002
Carbonic acid	1.200
	3.269

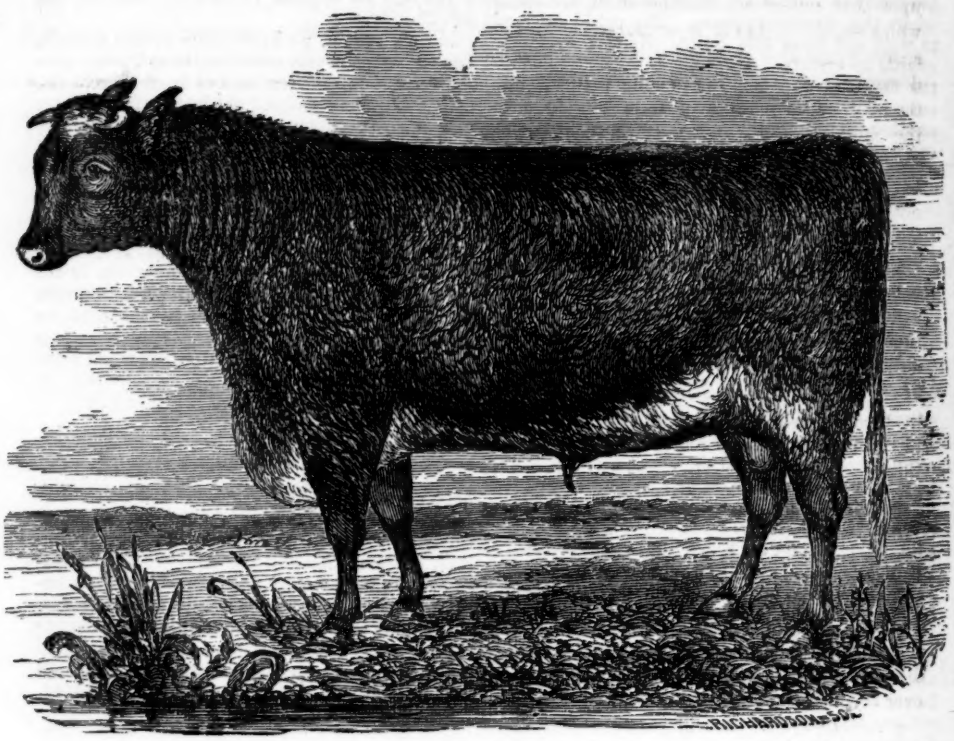
The carbonic acid was combined with the potash and lime, and was produced by combustion of the acid, with which these bases were originally combined. One thousand grains of the filtered juice, analysed for the acids, saccharine matter, and mucilage, yielded

	Grains.
Oxalic acid	3.53
Malic acid	7.30
Glucose, or grape sugar	9.63
Mucilage	3.30
	23.76

The oxalic acid is chiefly combined with potassa forming bin-oxalate of potash or salt of sorrel, but there is an excess of this acid, which is not taken up by any base present.

The malic acid, excepting the very minute quantity required to saturate the lime, is in a free state. It is obvious that, since no tartaric acid exists in the juice of the rhubarb stalk, it is not suitable for the manufacture of *wine*, and that the fermented juice has more the properties of cider.

Charles T. Jackson, M. D.,
State Assayer.



DURHAM BULL---CHICAGO DUKE.

The fine animal illustrated by this engraving, is the property of the Hon. JOHN WENTWORTH, of Chicago, Illinois, and was bred by R. A. ALEXANDER, of Woodford County, Kentucky.

Mr. Wentworth was born and reared on a farm in New Hampshire, and all his early life was devoted to the noble and inspiring pursuit of agriculture. Like many other young men, however, he wished to see the world in some of its other phases, and left the farm for the printing-office, which is the best epitome of the wide world in our knowledge. This led him into political affairs, and these into Congress. He has been a working man everywhere—at home, in the printing-office, caucus, on the stump, and in Congress. But in the midst of all these allurements, he never forgot the farm, nor lost sight of that domestic bliss which oftener resides in the farm-house than in any other place; and although immersed in the sea of politics as the editor of a paper, or in the halls of Congress, or guiding the interests of the people in a populous and progressive city, he has always found opportunity to return to his first love, and engage in some department of agricultural life. One of his efforts has been to introduce into the West a better breed of cattle, and the "Chicago Duke," who is now looking at you from above, is one of the specimens of his introduction.

We have often spoken of the Durham cattle as a breed, and do not think it necessary to devote space to that point now.

EXHUMATION OF RUINS.—There has existed a long time a record which fixed the site of the watch-house which was erected by the Plymouth settlers, on Burying Hill, during the late war with King Phillip, in 1675. The exact site and size of the building has never been accurately determined until Saturday last, when portions of the foundation were laid bare. The foundation was of stone, upon which were laid brick, made evidently of clay taken from our shore. The building was about twelve by sixteen feet, and was situated about one hundred feet North of the original fort erected by the settlers of 1620, and upon that part of the hill which commands a very extensive view of every direction. These ruins were found but about a foot below the surface of the ground, and have been several times interfered with by the digging of graves.—*Plymouth Rock.*

THE CATTLE DISEASE.

No person who has bestowed any consideration upon this subject will wonder at the prominence which we have given it in our paper, or think the space unprofitably occupied in which we have endeavored to arouse the community to a sense of the imminent danger that is threatening one of the most important interests of the Commonwealth. In this State, in the year 1855, the number of milch cows (we copy from the *Advertiser*, not having the documents at hand) was 148,569, and of heifers 35,441; valued together at ($4,892,-291) a little short of five millions of dollars. Of oxen there were 50,225, and of steers 27,286, valued together at ($3,246,341) more than three millions of dollars; an aggregate exceeding eight millions altogether. Of these 33,917 milch cows, 9444 heifers and 18,561 oxen and steers valued together at $2,022,921, or more than one-quarter of the whole, were returned from Worcester County, in the very heart of which is raging a disease affecting those animals, as novel in this State, as it is dangerous and destructive. Nor is this all; 8,116,009 pounds of butter, valued at $1,678,557, and 5,762,776 pounds of cheese, valued at $464,250, are returned as the annual product derivable directly from the useful animals that are now threatened with extermination by a disease more destructive than any thing that has ever affected neat stock in this country.

Could the disease be confined to this State alone, it would be bad enough, but it threatens to spread over the whole country. Cases are reported in New Hampshire and Connecticut, which can be traced to exposure from the infected districts, and the proper precautions are being taken, we trust, in time, to prevent its spread.

We often hear of its ravages in Europe, but we doubt whether a tithe of our readers are aware of the extent to which it has prevailed there, and the enormous expense which it has entailed upon the Government of Great Britain alone. We copy the following article from the New York *Tribune*, giving an account of the ravages of the pleuropneumonia in England, in 1744, and in Holland, in 1857:

"In 1744, a farmer residing at Poplar, in England, imported two calves from Holland, under circumstances exactly similar to those attending Mr. Chenery's importation. Starting from this point, slowly at first, but more rapidly as more means for its propagation were offered, it spread over the length and breadth of the land, destroying hundreds of thousands of cattle, and continuing its devastating effects with almost unmitigated severity down to 1754–5. Notwithstanding the deep and painful interest which this disease excited, and the efforts made by the government to stay its ravages, it was ascertained by one of the Commissioners appointed to investigate the matter, that in Nottinghamshire alone 40,000 head of cattle perished in six months, and in Cheshire upward of 10,000 in the same space of time.

By a special act of Parliament orders were given:

1st, For the killing of all the infected animals, and burying them entire with the skins on, 'slashed from head to tail,' that they might not be used for the purposes of the manufacturer.

2d, For the burning of all the hay and straw used about the animals.

3d, For the cleansing and fumigating of the sheds, etc., and for no sound cattle to be put in them for two months after the removal of the diseased.

4th, For no recovered animal to be allowed to go near others for a month after its convalescence.

5th, For no diseased cattle to be driven to fairs or markets, nor for the flesh to be used for dogs, etc.

6th, For no healthy cattle to be removed from a farm where the disease had prevailed in less than a month after its disappearance.

And, lastly, orders were given for the notice of an outbreak to be immediately sent by the farmers to the proper authorities.

In one year, the third of the existence of the disease, £135,000 were paid out of the public treasury as a recompense for the cattle killed according to the prescribed orders. During the year 80,000 head of cattle were killed because more or less infected, and nearly double that number died of the disease. The prompt action of the Government, although it did not eradicate the disease, yet much diminished its ravages, and undoubtedly shortened the period of its sojourn in England.

In 1857 over 14,000 head of cattle were slaughtered or died, in only forty-three villages in Holland, causing a distress among the peasantry of a lamentable nature. What distress an equal mortality among the neat stock of American farmers, most of them not over rich, would occasion, may be imagined. Let pleuropneumonia once get to the prairie country of the West, and sweep away 20 per cent. of the cattle from which this city is supplied, and what would be the effect upon the railroads and cities, that even under existing circumstances can barely hold their own? We therefore think it highly necessary that Ohio, Indiana, Illinois, and, coming Eastward, Pennsylvania, New York and New Jersey should take their precautions before they are invaded by the disease. A competent commissioner should be chosen by each of these States to go to Massachusetts, investigate the disease, and report to their several Legislatures the means of prevention found effectual, that the necessary legislation might at once be taken.

Once let the malady pass the boundaries of the State, and an irretrievable injury may have been done. It is almost unsafe to purchase a head of stock from Massachusetts, for, however remote from the infected district, they may have been diseased by reason of contact with some animal exported thence. When the State Commissioners are prepared to announce to the public which towns are and which are not infected, the butchers in this city, and stock-growers and farmers throughout the country, will at least be able to purchase understandingly.

As it is now, infected cattle from the Connecticut Valley, or other parts of Massachusetts, may be sent to this market, or to Albany, there sold to farmers for the yoke, and thus whole districts be ravaged by the disease. Not a single hoof should cross the borders of Connecticut except after being inspected, under the heaviest penalties; and the sooner this stringent regulation is adopted, the better it will be for us all."

At the meeting of the Governor and Council, on Thursday, May 24, it was decided that the peculiar circumstances of the prevailing cattle disease were such as to render the calling of an extra session of the Legislature expedient. Gov. Banks accordingly issued his proclamation, calling upon the Legislature to assemble at the State House, on Wednesday, May 30, at noon.

We have noticed fewer cases reported, the past week, but they have generally come from new quarters. Among the new cases is one at Pepperell, where the cow of Mr. Andrew Wood, which had been purchased in Brookfield, in April last,

was suspected of being diseased, and a subscription having been raised to indemnify the owner, was killed, together with her calf. Both animals proved to be suffering from the disease. It was ascertained that another cow, in North Lancaster, had been exposed from the keeping of Mr. Wood's cow in the same barn on her way from Brookfield, and she exhibited signs of the disease. She has been isolated until further action by the Commissioners. It is asserted, says the reporter of the *Journal*, and we have had the same assurance from other sources, that, in every case yet known to the Commissioners, a direct communication can be traced with Mr. Chenery's herd, or with cattle exposed by others which had received the contagion from that source. The fact is one of much importance, and it ought to be made known and well weighed, as an evidence of the *contagious* and not *epidemic* character of the disease.

On Wednesday, May 23, the Commissioners visited South Malden, and, after examination, ordered a cow belonging to Mrs. Susan Josslyn, and animals of John McBath, James Moran, Zebulon W. Davidson and Mr. Connors, thirteen in all, to be confined in enclosures isolated from all others. The cow belonging to Mrs. Josslyn was purchased of Mr. Chenery, of Belmont, but did not develop the disease till quite recently. The examination by the Commissioners resulted in strong proof that it was affected by a virulent lung disease. The other animals have been exposed, and having ranged over the marshes, may have given the disease to other cattle.

With regard to the spread of the cattle disease into Connecticut, we have the following:

Some of the Connecticut papers express fears that the disease has gained a footing in that State. To remove all doubt, Dr. Dadd, of Boston, visited the suspected district (Stafford Springs) a day or two since, and examined one or two animals, and pronounced them infected with pleuro-pneumonia of the worst type. The people held a town meeting, which was addressed by Dr. Dadd, and a committee was appointed to confer with the State Board of Agriculture upon the subject. The animal butchered was taken from Sturbridge, Mass.

On the other hand, the Hartford *Courant*, after full inquiry, is satisfied that the cattle panic which prevailed in Connecticut last week was unfounded, and that the pleuro-pneumonia has not yet been introduced into that State. It does not see the necessity for the grant of a large sum of money to keep the disease out of the State, but thinks that Commissioners should be appointed, with large discretionary powers, for a limited period, to act in concert with the local town authorities to prevent the moving of cattle through the State, or their introduction from Massachusetts.

May 28th, the House Committee on Agriculture, at Washington, had another meeting on the subject of the cattle disease in Massachusetts. The Secretary of the National Agricultural Society gave some further information relative to the matter.

Dr. Calvin Cutter informs the *Journal*, that on the 28th he was called to examine a cow at Antrim, N. H., which was said to be diseased. He found in the pasture of David Hills, two cows exhibiting evidence of the disease. They were killed and examined, and both exhibited pleuro-pneumonia of an intense type. These animals were taken from Acton, Mass., to New Hampshire on the 4th of May. The citizens of Antrim held a meeting on the 28th, to devise means for the safety of their herds. Meetings were held in Deering and Weare on Monday, which passed resolves peremptorily prohibiting the passage of cattle across the town lines. All the cattle in pastures adjacent to other towns are to be removed into the interior, and only horses will be kept in the boundary pastures. The utmost vigilance will be used to prevent contagion.

Several of our Agricultural Societies, among them the Middlesex, South Middlesex and Franklin Societies, have voted to dispense with the show of neat cattle the next fall, and the rest will probably follow their example. Indeed, we think it would be the wisest course for all the New England Agricultural Societies to avoid any possible exposure of stock to the disease, during the present season, at least.

Several cases have been reported in Holden, Worcester county. Cattle killed there have shown unmistakable proofs of the infection. The Worcester *Spy* says:

"There is now danger that the disease will be introduced here by cattle driven into the city from neighboring towns. It is already rumored that a pair of oxen affected with the disease have been driven into the city from Holden. We gave the particulars of the slaughter, on account of the disease, of Mr. Dike's cow in Holden. Another cow that took the infection from this, has been slaughtered there, and found very much diseased; and the disease has appeared in a yoke of oxen belonging to the same herd. It is estimated that from seventy-five to one hundred head of cattle have been exposed in Holden. There is need of the utmost caution."

The near approach of the disease naturally creates much excitement in that vicinity. The Mayor of Worcester, which adjoins Holden, has issued a proclamation recommending the complete isolation of individual herds in Worcester, at whatever cost or inconvenience to the owners. Also the erection of fences to separate contiguous pastures by the space of twenty-five or thirty feet, and that cattle be driven upon the highways only in cases of absolute necessity, and then that contact with others be carefully avoided. Policemen are stationed upon the streets leading from the

infected districts, with peremptory instructions to prevent all ingress of cattle upon any pretext whatever.

A similar course is being taken by the farmers of New Hampshire. The last number of the Concord *Patriot* gives an account of meetings held in Weare, Deering, Hopkinton and Hillsborough. The people are determined to stop the passage through their towns of all cattle, from whatever direction. New cases have been found in Hillsborough and Antrim. The disease has not made its appearance in Weare, as yet, and the authorities hope, by prompt action, to escape a visitation.

A rumor is published in some of the papers that the disease has made its appearance in York county, Maine, and that several valuable cows have died from its effects. A commission from Maine, consisting of S. L. Goodale, Esq., Secretary of the Board of Agriculture, Dr. E. Holmes, editor of the *Maine Farmer*, and Dr. Amos Nourse, of Bath, arrived in this city to attend the extra session of our Legislature, with regard to the disease.

New Jersey, also, is threatened by the scourge. It has appeared in Newark. The *Journal* gives the following statement:

In December last, Mr. Johnson, a Newark farmer, bought six calves in the New York market. In a few weeks two of them died, and he has since lost two others. He has had five cases which he thinks entirely recovered, and five are now sick. Last week one of his animals died, and another was killed. These animals were examined by competent surgeons and others, and it is said that both cases presented every indication of the disease existing in this State, and were pronounced by Dr. Gryce, V. S., of New York, as well as the medical gentlemen present, unmistakable cases of pleuro-pneumonia. A large portion of Mr. Johnson's herd have been sent to pasture, where there are hundreds of cattle together, and it is feared that disease has thus obtained a sure foothold.

A commission has been appointed by the Governor of Ohio, to visit this State, and investigate the origin, causes and nature of the cattle disease.

The General Assembly of Rhode Island have passed an act to prevent the introduction and dissemination of infectious or contagious disease among the neat cattle in that State. It makes stringent provisions against the introduction of any cattle into the State in violation of the act; give town councils full power to take all measures they may deem necessary to prevent the spread of the disease in their several towns; provides for a board of commissioners, of one member from each county, to attend to the faithful execution of the act, and fixes severe penalties upon the sale of any cattle known to be infected, and upon transporting cattle from a town where the disease is known to exist, to other towns in the State. It takes immediate effect, and is to continue in operation until suspended by proclamation of the Governor.

On Friday, June 1, before the special committee of the Legislature, Rev. Daniel Lindley, recently from the mission at South Africa, gave some interesting facts concerning the disease in that country. He said:

The distemper was introduced into South Africa about six years ago, by the importation of a bull from Holland. He was on the voyage about two months, and the disease appeared in about six weeks, but its nature was not known at first. The animal died, but not before the disease had spread. In that country the cattle are kept in large herds, and wander over large tracts of land. Oxen are used there for transporting goods all over that country. When the existence of disease became known it was too far spread to be stopped. Nothing was done by the government to stop it, and the destruction was extensive. The destruction there has been such that many persons have been obliged to give up cattle, and have taken to raising sheep instead.

He was anxious to bring the committee to realize the importance of the subject. It has spread 1200 miles from Cape Town across the continent, and was fast spreading along the coast. Animals died in about eleven weeks after exposure. Inoculation was practiced by every man for himself, and was partially successful. Mr. Lindley explained the process of inoculation, and the symptoms of the disease. He said that some of the cattle died from inoculation whose lungs were not affected at all. There is no accounting for this; it is contrary to science and all general rules. He had known animals that had died after inoculation, that had taken the disease from an exposure. It was hard to tell whether the animal died from the disease or from inoculation. Inoculation will not cure—it is only a preventive. Some of the oxen get along very well after inoculation, and some of them are quite sick. Others are worked all the time. In Europe they think less of inoculation than in South Africa. He did not know how the climate would affect the matter here. Where he lived, the thermometer ranged from 93° to 42°. He was confident that the disease could be stopped here by isolation. He was certain that it is a contagious disease.

A vote was taken allowing the gentlemen from Maine to ask questions, and the witness was examined minutely into the peculiarities of the disease in Africa, and as to his opinion concerning the similarity of that disease with the one existing in Massachusetts. He was quite confident that it was the same disease. They have in South Africa the genuine pleuro-pneumonia, which they know all about. This disease under discussion, came afterwards, and is very different from it, in being contagious.

HEALTH OF AMERICANS.—De Bow's mortality statistics, compiled from the last census, show that the people of the United States are the healthiest on the globe. The deaths are three hundred and twenty thousand per year, or one and a half per cent. of the population. In England the ratio is near two per cent., and in France nearly three per cent. Virginia and North Carolina are the healthiest of the States, and have six hundred and thirty-eight inhabitants over one hundred years of age.

FIBRILIA, OR FLAX COTTON.—Three addresses delivered by STEPHEN M. ALLEN, Esq., before the Legislative Societies of Massachusetts and Rhode Island, and the Class on Agriculture at Yale College. We gave the substance of these lectures last winter in one of our reports of the Legislative Agricultural Society. For sale by A. Williams & Co., Boston.

SUMMER PRUNING APPLE TREES.

We have often called attention to this subject, and are happy to know that the practice of pruning trees in the spring, while the sap is in motion, has been entirely discontinued by large numbers of our best farmers. For the comfort of those who controvert the theory of summer pruning, we will say that we are not acquainted with any living horticulturist who is distinguished in his profession, who is the advocate of spring pruning; nor do we know of any eminent writer on the subject, either in this country, or in England, or France, who would recommend the orchardist to prune his trees while the sap is in active motion. No one thing, in our judgment, is so certainly destructive to our apple orchards as to trim them in the months of March, April and May, and if the season is a warm and early one, they had better not be touched during the last of February.

At some moment of more leisure we will collect the authorities which favor summer pruning, and think they will be sufficient to settle the matter conclusively in any observing and unprejudiced mind.

These remarks have been suggested by noticing in the *Germantown Telegraph* the following paragraphs. We have been on the grounds of Mr. FREAS, the editor of the *Telegraph*, have observed his trees, and heard his opinions, and are happy of an opportunity to lay the latter before the reader.

It is a pretty well established fact that apple trees—and we would add pear trees—pruned from the middle of July to the middle of August, sustain the operation with much more advantage than if pruned at any other period of the year. If pruned at this time, the wound will heal over, and make, what surgeons would say of a properly amputated arm or leg, a handsome stump. If the branches be lopped in winter or spring, the stump generally leaves a perpetual scar; and if after the sap has commenced flowing, a bare bone, as it were, projecting from the living parts of the tree, and remaining there until it rots away, when frequently the decay continues on, as a sort of gangrene, into the very heart of the tree, much to its injury. Who has not observed this in his experience?

We have more than once witnessed the benefits of pruning in midsummer, and have always been impressed with the advantages over the system generally pursued. On one or two occasions, some years ago, we adverted to the fact, and now again call attention to it, especially as the season for trying it is at hand.

ADULTERATIONS OF FOOD.—We want a little touch of French depotism in these matters. Every drop of milk brought into Paris is tested at the barriers by the lactometer, to see if the "iron-tailed cow" has been guilty of diluting it—if so the whole of it is remorselessly thrown into the gutter; the Paris milk is very pure in consequence. If a tradesman adulterates any article of food offered for sale, he is first fined, and then made publicly to confess his fault, by means of a large placard in his window, setting forth the exact nature of the trick he has played upon his customers. Imagine some of our leading tradesmen obliged to sit in sackcloth and ashes, and suffer this moral pillory! One or two rogues thus exposed would have a marvelous effect in keeping the sand out of the sugar and the burnt beans out of the coffee.—*Once a Week.*

For the New England Farmer.

BEES.

MR. EDITOR:—For several years past bee culture has been growing in interest throughout New England, and among most all classes; but more especially among the mechanics and professional men. The culture of the bee is a most fascinating employment, and one every way adapted to the female department of the household. I am often inquired of as to the price of a swarm of bees. Let me say the spring of the year, before swarming time, is the best time to purchase, because ordinarily you get two stocks instead of one; if you buy a new swarm, you get no cost from it the same year. To ascertain whether the swarm is a good one, say any time during the month of May, try its weight, and see that this is right; a common hive will weigh about twenty-five pounds. The Langstroth hive, as made by Mr. Frye, of this town, weighs about forty-five pounds; but it is too heavy; the bees, five or six, and the comb and honey, from ten to twenty-five pounds; though few of our common hives have this quantity of honey in them at this season of the year. See that the comb looks bright and clean. If it is two years old, it will be of a darkish yellow color. The older, the darker the comb will be; observe also whether there are bees between nearly all the sheets of comb. A person who is accustomed to seeing bees often, can tell pretty well as to their health. A good healthy swarm will have a peculiar look about them which cannot be described. There is a bright, brisk, lively, wide-awake look and movement about them which settles this question. If you can purchase a swarm which answers this description, with a fair hive, complete as to boxes, &c., anywhere within fifty miles of Boston, for ten dollars, take it, if you want; it's cheap enough; and if you give the bees the care they ought to receive, it will pay you fifty per cent. the first year. Last season bees did poorly in all this region. May was too cold and wet for them, and few bee-keepers "had a swarm in May (or June) worth a load of hay." This month and the next are the two harvest months in bee culture in New England. What extra honey is made by the bees after the 20th of July, will not be more than what you will be obliged to give your stocks in the fall. Bees require as much care during this month, as any other during the year, and many stocks are lost, dying of starvation, simply from want of a little timely attention from their master. I find the early morning the best time to attend to all bee matters, where it is necessary to come in contact with them. My rule is, whenever I am about to do anything about the hive likely to disturb them

much, always to be prepared for a fight, as feeling safe from their sting, I take things "fair and easy," and usually learn my bees so. During the past winter, I left my stocks out exposed to the weather, with no protection but the hive, and they stand on the north side of a high hill, and they came out finely this spring, and I have never had any which look better than mine at the present time; heretofore, I have always advised housing them during the coldest months. N. Q. T.

King Oak Hill, May, 1860.

BUTTER AND CHURNS.

We have just come from the stall of one of the neatest butter merchants in Boston market,—a man whose personal appearance, at first sight, is a guaranty that what he sends to your table as good butter will be as fragrant as a June rose, provided such can be found among the butter-makers of New England or New York. This stall is No. 1, Faneuil Hall Market, and the man you will meet there, in a long frock, as white as the driven snow, is Mr. J. W. MERRIAM. Upon asking him what proportion of *first rate* butter he thinks there is out of all brought into market, he replied, "*Only one pound in ten!*" This is the judgment of a man whose business of life has been for many years to buy, and sell, and judge of the article of which we are speaking, and he states it as his opinion that only *one* pound out of every ten brought to Boston market would be pronounced by good judges as *first rate* butter!

It costs as much, ordinarily, to make a pound of poor butter as to make a pound of good, so that if we had the means of showing how much is brought into this market annually, we could show a loss to the farmer which would startle him so as nearly to shake the very bones out of his body! But this shaking would not abate the prejudice of some against thought and investigation, and they would still go on cutting their hay and grain at improper times and attempting to cure them without the use of caps, hacking their fruit trees in March and April, and making miserable butter that is a drug at ten cents a pound when it might just as well command seventeen!

It is not a difficult thing to make good butter,—but in order to do so, certain conditions must be complied with, because they are absolutely essential conditions, and without this compliance, all the labor that can be bestowed upon it, together with the best materials, will be employed in vain. The first prerequisite is *cleanliness:* cleanliness almost to a fault,—and this must begin with the milker. The cow's bag must be kept clean, so that nothing adhering there shall taint the milk before it passes into the hands of the dairy-woman. This care must be observed in every stage of the process. The milk and cream should be kept in a room by themselves; never where there are turnips, onions, or other roots, or smoked or dried fish, or any thing else that imparts odor to the air of the room.

The next important consideration is that of *temperature;* this should be as even as possible, not only while the cream is being gathered, but especially so when it is brought out and put into the churn. All the surroundings should then be alike in temperature—the cream, the churn itself, and the air of the room in which the churning is going on. For the want of this uniformity many a vexatious hour has been passed, beating the cream into froth, but bringing no butter. It will not answer to bring cream from a room where the temperature is 62°, and dash it into a churn the temperature of which stands at 40°. An equalizing process immediately takes place between the two substances,—the cream elevating the temperature of the churn, and the churn depressing that of the cream, so that the latter is in no condition to be converted speedily into butter.

When the butter is made, and is really *good*, its value in the market greatly depends upon the manner in which it is put up. Mr. Merriam showed us two lots he had just received from the town of R * * * * *, Vermont, and remarked as he replaced the covers upon the tubs, "Allowing the butter to be of the same quality, there is three or four cents difference per pound in its value in consequence of the manner of packing! Look here, there are no prints of fingers *on that lot*, and the cloths that cover it are adjusted with just as much nicety, as though its sale depended entirely upon that point. See how white the tubs are! This lot of butter is worth *five cents* a pound more than the other." The most money can be made on the best butter, both by the farmer and the butter-merchant.

Many persons impute great virtue to the churn in butter-making, and seem to suppose that a good article cannot be made, unless by the use of a particular churn. But with a good deal of experience and observation in the matter, we have found that any churn so constructed as to strike the cream a frequent and smart blow, would soon bring the butter, provided the other conditions were right, good cream and a proper temperature in the cream, churn and room. The common dash churn is constructed upon the right principle to bring the butter quickly, and the only objection to it seems to be the hard work required to use it.

Several points more suggest themselves in regard to this important baanch of farming, but our remarks are already too long for us to enumerate them. We trust this point will be remembered by every dairy-woman, viz., That the butter that is made the best, and put up in the most careful manner, *will always return the largest profit!*

For the New England Farmer.

A GOOD EXAMPLE IN FARMING.

MR. EDITOR:—Your correspondent, T. J. Pinkham, is laboring hard to convince us that farming is a most unprofitable business, but I am one of those that disagree with him in the matter. That poor farming does not pay, I will admit, but does poor *anything-else* pay? Will a merchant who does not take every possible means to keep himself thoroughly informed in regard to the various details of his business ever succeed?

I believe that farming, *good farming, will* pay as well as any other business, all things being equal; that it requires labor, tact, energy, and a good amount of common sense, I will admit; but will a man succeed in any business without these very *desirable* requisites?

In walking with a gentleman in his pasture a few months since, we came across a sow of very fair appearance; says the farmer, I have realized more than seventy-five dollars from the sale of pigs from that animal the present season, and it has not cost me five dollars to keep her! An acquaintance purchased late in the fall of '58, fifty young ewe sheep at $1,25 a head—has sold wool averaging $1,90 per head, and forty-five lambs at an average of $1,75 each, realizing over $3,50 per head for keeping his sheep less than one year, the cost of which will not exceed 88 cents, and has his 50 ewes for another year's service!

A case in point came under the writer's notice a short time since, in one of the towns not many miles from Boston:

An elderly gentleman lived on, and carried on, quite an extensive farm, but after many years of hard labor and frugal economy, found himself largely in debt, there being a heavy mortgage upon his farm. A son of the old gentleman becoming of age some five years since, bought the farm of his father, agreeing to pay a small amount over the mortgage, which nearly covered the value of the estate. The young man commenced, without capital, save stout hands and a good supply of common sense, and to-day he has paid for his farm to the last farthing, besides making valuable improvements.

How has this been done? Not by hard work alone, but with good calculation and sound judgment combined with his labor. What we want, brother farmers, is a thorough knowledge of the nature of our land, and its adaptation to certain crops, and with deep plowing, high manuring and judicious managing, if farming cannot be made profitable, what business can? Are not my ways equal, saith the Lord, and who shall say that the honest tiller of the soil shall not receive compensation for his toil, equal to that of any other trade or profession? C. C. H.

Boston, 1860.

HOW TO LAY UP A RAIL FENCE IN A WORKMAN-LIKE MANNER.—Set stakes for a single line, then have one stake made smooth with an arm of tough wood reaching out two feet if your rails are ten feet long. The end of the arm shows where the rails are to cross. Lay the smallest and straightest at the bottom, and the large ones on top. After the worm is laid, put under the chunks. Then, as you build, put the large ends of the rails in the low places. Never notch your rails, if they were split as they should be. When laying the last course before staking, be careful to have a small end come under the stakes. Be careful to cross the stakes the right way, and lay the big ends of the riders on top. Then the passer-by, as he goes pondering along, will take notice, and say: *"The man that laid up that fence knew how."—Farmer's Advocate.*

EXTRACTS AND REPLIES.

THE DESTROYER OF CATTLE.

The concentrated wisdom of the Legislature of Massachusetts is to be brought to bear upon the cattle disease the present week. If they shall be fortunate enough to have clear ideas on the subject, it will be more than has yet been diffused in the community. So far as I can learn, all the certain cases that have occurred in the Commonwealth have been traceable to one source—that is, to animals recently imported from Holland—and further, its spread has been by contagious influence. This contagion may be by direct proximity of the animals themselves, or by fodder or other objects contaminated by them. Its development when imbibed is more or less rapid, according to circumstances. It may remain latent for months, so that there can be no certainty of exemption, where there has been exposure.

I have great doubts of the propriety of seizing and slaying a few animals when the disorder is already so widely spread, and there are so many animals that have been more or less exposed. This might have been well at the first outset of the disease; now it would be better to have its characteristics, and the treatment that is applicable, from men of science—if there be such among us. P.

Essex Co., Mass., May 28, 1860.

REMARKS.—The question is quite often asked, "How soon do cattle that have contracted the lung disease show symptoms of it?" and is very properly answered above, "that it may remain latent for months." Cases have been described to us of cattle dying quite soon after the disease showed itself, where it was certain that the animal had not been exposed for two months, and other cases of the most decided character where the exposure had taken place only ten days before the death of the animal exposed. There is something in the disease and its operations that is mysterious and beyond the knowledge of the most learned. We trust that exact scientific treatment will yet enable us to arrest it, at least in some degree, and avert the calamity that now threatens to pass over the entire State.

CULTIVATION OF PEAS.

On page 223 of the *Farmer* for the present month is an inquiry about raising peas. The pea crop is a very important one in this country. Any good land will produce a fair crop if well prepared. Greensward is generally preferred for sowing; they should be thoroughly harrowed in and rolled. I have never heard of plowing in on greensward, and think they would not come up the same season. Plaster is beneficial; some wet their peas and mix plaster with them when sowing; others sow the plaster broadcast after the peas are up. In a wet season it is thought the plaster makes too much vines; but it does more good here than in many places. Sow about two bushels of peas to an acre.

OTTER OR CREEPER SHEEP.

As the *Maine Farmer* thinks this kind of sheep have become extinct, I will say what little I know about them. My father bought a pair of them in the town of Pawlet, Vt., about forty-five years ago, and has had them ever since. We have two ewes and a buck now. They have raised no lambs for four or five years. They have all the good qualities that the *Maine Farmer* speaks of. We have had as many as twenty-five or

thirty sometimes. If I was going to raise sheep I should prefer this kind to any I ever saw. Father says he sheared 9¾ lbs. of wool from the ram last year. We always called them "the short-legged sheep."

Branford, Vt. O. H. HOADLEY.

RINGWORM ON CATTLE.

In the *Farmer* for the present month, on page 215, is an inquiry by Charles S. Weld for a cure for the above disease. I can inform him and others, that, when a boy residing in New Hampshire, I knew many cases exactly similar to those he mentions. We generally greased the diseased parts well with what was termed "pot skimmings," after boiling meat and vegetables, and I think it always effected a cure. The remedy is simple and easily tried. L. VARNEY.

REMARKS.—We notice two or three correspondents of the *Rural New-Yorker* recommend tallow or lard for the cure of warts on cattle. These remedies are so accessible and simple, that we gladly recommend their trial. One of the correspondents of the *Rural*, says he had a heifer, one of whose eyes "was completely covered with large red warts, and that one of her ears was full of them," and that a few applications of tallow completely cured them.

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THE SEASON

Has been very favorable here so far—rather dry, but the last three weeks have been warm. Apple trees are now in full bloom in this vicinity, though near the lake and in other exposed situations they are not so forward. There is a very full bloom.

A sudden change in the weather occurred in the night of the 19th. On the morning of the 20th, mercury fell to 37 degrees, and the day was cold. A frost was generally expected, but fortunately none came, unless in some very frosty locations.

What is the most hardy variety of raspberries suitable for garden culture? The white raspberries are raised here considerably, but a great part of the bushes were killed to the ground last winter, so there will be but little fruit this summer. L. VARNEY.

Bloomfield, C. W., 5 Mo. 21st, 1860.

REMARKS.—All the raspberries that we have cultivated do much better for a little protection through the winter. Evergreen boughs thrown against them so that they will remain in place are excellent; over them may be thrown a little hay or straw. The Allen, from Western New York, is said to be very hardy and productive. The best way is not to attempt the cultivation of too many, but to protect those you have.

—

LEAD PIPE FOR CONDUCTING WATER.

Having procured water on different farms for my family and stock, both in lead pipes and bored logs, by the natural fountain pressure and by the pump, like your querist in Dayton, Me., please accept the following in answer to his inquiries, as the result of no small experience.

When water is raised by a pump, let the distance be longer or shorter, it is stagnant in the pipe during the night and most of the day, and with the occasional use of a private family, of course has great liability by corrosion to be affected by a leaden pipe, which I should not consider safe, with or without tin coating for this use.

For common aqueducts, I have found no bad effect from lead pipes, where there was a constant circulation by waste pipes, which will prevent freezing in winter, and make it fresh and healthful.

1. White pine logs—easy to bore—always sweet—no bad taste.

2. Say six or eight inches, sufficient besides the sap, to leave an inch and a half without the splice.

3. An inch and a half bore will do, as much heart outside.

4. Bark is of no consequence.

Holyoke, May 22, 1860. BENJAMIN WILLARD.

STRIPPING THE COW—TO PREVENT SUCKING HERSELF—PRUNING ORCHARDS.

I wish to inquire whether it is injurious to strip or milk a cow the second time? Does it dry them up? Also, the best way to prevent a cow from sucking herself, and the best time to trim young orchards?

Sheldon, Vt., 1860. AN OLD SUBSCRIBER.

REMARKS.—Milk the cow gently, quickly and *thoroughly*, then let her alone.

We do not know the best way to prevent a cow from sucking herself, having seen but one method tried, that of placing pointed nails in a bow hanging upon the cow's neck. There may be a better way.

With regard to the orchards, we do know. Trim them with the finger by rubbing off the young shoots; but if knife or saw are necessary, use them between June 15 and July 10. If unable to do the work then, omit it until the leaves have fallen in the autumn.

—

TO CURE SCRATCHES ON HORSES.

Take the gum that runs out on the end of pitch pines, and put on some every day, and it effects a cure in a few days.

I have tried the above, and found it an effectual cure. One of my neighbors tried it, and it cured his horse after he had tried almost everything else. H. W. B.

Jacksonville, Vt., 1860.

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HORSE PITCHFORK.

Will you, or your correspondent, "H. B. Wood, of Chester, Vt.," describe the horse pitchfork spoken of by him in the May number of the *Farmer?*

Little Compton, R. I. JUNIPER.

For the New England Farmer.

THE BENEFIT OF A FARM.

MESSRS. EDITORS:—The profit of farming has been pretty ably discussed by your correspondents in some of the last numbers of the *N. E. Farmer*. I more than half agree with Mr. Pinkham in his opinion about the profit of farming in the county of Middlesex. Merely the act of cultivating the soil, or digging and plowing the earth to raise roots and grain, unless the farmer can do it with his own hands, will not prove a thriving business, as we now pay for labor. If the farmer's prosperity and income depended entirely upon what he could raise to sell from his cultivated crops, after deducting the price of labor, I should fully agree with Mr. Pinkham, that farming was not very profitable. A farm is a great piece of machinery; every wheel must be kept in place, and ready to act in concert, like all other machinery, to make it profitable to the owner. It is true that many professional men, traders and mechanics, can earn more by the day, than the farmer can by his labor, but the moment their hands cease to act, that moment their income stops; while the farmer never need be out of business at some kind of pay. Almost every farmer has a family on hand, or one in prospect, and we will make a comparison between him and one of an other occupation.

Every farmer has buildings on his farm, and frequently expensive ones, and almost all in the back towns are supplied with fuel from their growing wood-lots; they have plenty of work at home for their children, when not at school, instead of herding with idle associates to confirm them in vicious habits. They keep one or more horses which they use for pleasure, as well as

work; then there is the privilege of collecting the various kinds of fruit and salads of spontaneous growth, with a variety of other privileges denied to people in cities and large villages. These privileges are not always considered as items of income by the farmer; but let him give credit for them, at the price city folks pay, and the amount will show a different aspect when added to the cultivated productions of the farm. Farmers in the county of Middlesex live in houses which would rent in villages from $100 to $300 or more per annum, which they little think of putting to the income of the farm. Farmers' children are a great deal cheaper, and I think better, brought up on the farm, than they are in villages where there is little or nothing for them to do when not at school. Among other benefits of the farm, one important item is, the farmer is his own boss, he is not under the control of the bell, or the capricious order of an overseer, has plenty of work always on hand for himself and boys, without soliciting it from richer men than himself.

It is utterly impossible to make out estimates which will apply to general cases. I have known farmers run in debt for poor farms, and get rich from them, and have known others who had good farms given them, grow poor in spite of industry and science. After all, farmers in the country towns, by some means, pay most of the taxes and subscriptions, have every thing enough but contentment, gewgaws and finery, which they can very well dispense with, and can carry their heads up pretty well, if they would only think so, and I cannot see but they are as well off as other folks.

N. Wilmington. SILAS BROWN.

For the New England Farmer.

OATS AND CLOVER.

FRIEND BROWN:—I am a constant reader of the *N. E. Farmer*, as it comes to my family every week. I feel anxious to give some of my experience as an old farmer; for I have done with labor years ago. I have been pleased in reading questions asked, and views given in raising chickens, turkeys, goslings, pigs, sheep, horned cattle and horses. Also inquiries and answers given in cultivating the soil, the managing of crops, fertilizers, &c.

I suppose most of your readers well understand that all lands do not require the same treatment. All the animal and vegetable manures do well on all the earth, as far as my experience goes; but much better on some soils than others. There seems to be a change somewhere; for soon after plaster became in use on interval land it worked wonders; the hill lands, with few exceptions, got no benefit. At this time the hill farms receive the most benefit from it. Ashes do far more good than many years ago. As most farmers do not understand how to analyze the soil, it is well to try experiments. I have learned much in that way.

Not long since I noticed an inquiry concerning clover as a fertilizer. There are different opinions concerning it. My views are to let the whole crop remain on the surface until the following spring; if not, sow winter grain. In such case plow a very short time before sowing. If any man disputes it, let him try the experiment. On land seeded to clover with oats, where the oats lay in swath all through the next season, from soon after the clover started to grow, until mowing time, I have seen where every swath was almost as far distant as I could see the field, there being all of twice as much clover on the same width of ground as between the swaths.

Walpole, N. H., 1860. AN OLD FARMER.

SPRING.

BY RICHARD C. TRENCH.

Who was it that so lately said
All pulses in thy heart were dead—

Old Earth, that now in festal robes
Appearest, as a bride new wed?

O, wrapped so late in winding-sheet,
Thy winding-sheet, O! where is fled?

Lo! 'tis an emerald carpet now,
Where the young monarch, Spring, may tread.

He comes—and, a defeated king,
Old Winter to the hills is fled.

The warm wind broke his frosty spear,
And loosed the helmet from his head.

And he weak showers of arrowy sleet
For his strongholds has vainly sped.

All that was sleeping is awake,
And all is living that was dead.

Who listens now can hear the streams
Leap tinkling down their pebbly bed—

Or see them, from their fetters free,
Like silver snakes the meadows thread.

The joy, the life, the hope of earth,
They slept awhile, they were not dead,

O thou who say'st thy sear heart ne'er
With verdure can again be spread—

O thou, who mournest them that sleep,
Low lying in an earthy bed—

Look out on this reviving world,
And be new hopes within thee bred!

PROSPECTS FOR FRUIT.—A correspondent from Port Kent, Essex county, N. Y., writes as follows: "We are suffering even more than last season from the want of rain—but we never had higher promise of fruit—our trees of every description are loaded down with blossoms." Port Kent lies on the westerly side of Lake Champlain, nearly opposite Burlington. The reports from every direction are equally favorable. Even the peach trees have waked up in many places, and have given a pretty liberal blossom. The letter of our correspondent was dated 18th—we hope before this time that the clouds over Port Kent have wept until the people have laughed.

SPAYING COWS.—The *American Stock Journal* should have credited the article which it publishes on this subject, and written by Mr. E. R. Andrews, to the *New England Farmer*, as it was written by him at our special request.

THE EXTRA SESSION.

The Massachusetts Legislature rose on Wednesday morning, June 13th, after a session of fourteen days. The subject which called them together was one of grave moment to the Commonwealth, and they have acted quite as promptly, and probably as wisely, as could be desired or expected. The bills relating to the cattle disease, as they finally passed, we present below, and those who peruse them will get some idea of the extent and novel intricacy of the subject, and the necessity of consistent, fair and efficient, as well as speedy action. "For our part," says the *Journal*, and we copy their remarks as expressing our own opinion in the matter, "we think the State deserves great credit for the manner in which it has dealt with this mysterious visitation upon our herds. The course of the Commissioners is now generally approved. The Governor did well to summon the Legislature as soon as the extent of the evil became clearly apparent; and the members of the two Houses have met their duties in a becoming spirit. The appropriations have been liberal; and as to these two bills, time and experience only can disclose wherein they are defective. They seem to us to be the best, on the whole, that can be devised in the present state of information on the subject matter. We trust now that the towns and all public officers will see that the provisions are rigorously carried out."

An Act

Concerning Contagious Diseases among Cattle.

Be it enacted by the Senate and House of Representatives, in General Court assembled, and by the authority of the same, as follows:

Sect. 1. The Selectmen of towns and the Mayor and Aldermen of cities, in case of the existence in this Commonwealth of the disease called pleuro-pneumonia, or any other contagious disease among cattle, shall cause the cattle in their respective towns and cities, which are infected, or which have been exposed to infection, to be secured or collected in some suitable place or places within such city or town, and kept isolated; and, when taken from the possession of their owners, to be maintained, one-fifth of the expense thereof to be paid by the town or city wherein the animal is kept, and four-fifths at the expense of the Commonwealth, such isolation to continue so long as the existence of such disease, or other circumstances, renders the same necessary.

Sect. 2. Said Selectmen or Mayor and Aldermen, when any such animal is adjudged by a veterinary surgeon or physician, by them selected, to be infected with pleuro-pneumonia, or any other contagious disease, may, in their discretion, order such diseased animal to be forthwith killed and buried at the expense of such town or city.

Sect. 3. Said Selectmen and Mayor and Aldermen shall cause all cattle which, in their opinion, should be killed, to be appraised by three competent and disinterested men, under oath, at the value thereof at the time of the appraisal, and the amount of the appraisal shall be paid, as provided in the first section.

Sect. 4. Said Selectmen, and Mayor and Aldermen within their respective towns and cities, are hereby authorized to prohibit the departure of cattle from any enclosure, or to exclude cattle therefrom.

Sect. 5. Said Selectmen and Mayor and Aldermen may make regulations in writing to regulate or prohibit the passage from, to, or through their respective cities, or towns, or from place to place within the same, of any neat cattle, and may arrest and detain at the cost of the owners thereof all cattle found passing in violation of such regulations, and may take all other necessary measures for the enforcement of such prohibition, and, also, for preventing the spread of any such disease among the cattle in their respective towns and cities, and the immediate vicinity thereof.

Sect. 6. The regulations made by Selectmen and Mayors and Aldermen, in pursuance of the foregoing section, shall be recorded upon the records of their towns and cities respectively, and shall be published in such towns and cities in such manner as may be provided in such regulations.

Sect. 7. Said Selectmen, and Mayor and Aldermen, are authorized to cause all cattle infected with such disease, or which have been exposed thereto, to be forthwith branded upon the rump with the letter P, so as to distinguish the animal from other healthy cattle; and no cattle so branded shall be sold or disposed of except with the knowledge and consent of such Selectmen and Mayor and Aldermen. Any person, without such knowledge or consent, selling or disposing of an animal so branded, or selling or disposing of an animal known to be affected with such disease, or known to have been exposed thereto within one year previous to such sale, or disposal, shall be punished by a fine not exceeding five hundred dollars, or by imprisonment not exceeding one year.

Sect. 8. Any person disobeying the orders of the Selectmen or Mayor and Aldermen, made in conformity with the fourth section, or driving or transporting any neat cattle contrary to the regulations made, recorded and published as aforesaid, shall be punished by fine not exceeding five hundred dollars, or by imprisonment not exceeding one year.

Sect. 9. Whoever knows or has reason to suspect the existence of any such disease among the cattle in his possession, or under his care, shall forthwith give notice to the Selectmen of the town, or Mayor and Aldermen of the city where such cattle may be kept, and for failure to do so shall be punished by fine not exceeding five hundred dollars, or by imprisonment not exceeding one year.

Sect. 10. Any town or city whose officers shall neglect or refuse to carry into effect the provisions of sections one, two, three, four, five, six and seven, shall forfeit a sum not exceeding five hundred dollars for each day's neglect.

Sect. 11. All appraisals made under the provisions of this act shall be in writing, and signed by the appraisers, and the same shall be certified to the Governor and Council, to the treasurer of the several cities and towns wherein the cattle appraised were kept by the Selectmen and Mayors and Aldermen respectively.

Sect. 12. The Selectmen of towns and Mayor and Aldermen of cities are hereby authorized, when in their judgment it shall be necessary to carry into effect the purposes of this act, to take and hold possession, for a term not exceeding one year, within their respective towns and cities, of any land, without buildings other than barns thereon, upon which it may be necessary to inclose and isolate any cattle, and they shall cause the damages sustained by the owner in consequence of such taking and holding to be appraised by the assessors of the town or city wherein the lands so taken are situated, and they shall further cause a description of such land, setting forth the boundaries thereof, and the area as nearly as may be estimated, together with said appraisal by the assessors, to be entered on the records of the town or city. The amount of said appraisal shall be paid as provided in the first section, in such sums and at such times as the Selectmen or Mayor and Aldermen respectively may order. If the owner of any land so taken shall be dissatisfied with the appraisal of said assessors, he may by action of contract recover of the town or city wherein the lands lie a fair compensation for the damages sustained by him; but no costs shall be taxed, unless the damages recovered in such action, exclusive of interest, exceed the appraisal of the assessors. And the Commonwealth shall reimburse any town or city four-fifths of any sum recovered of such town or city in any such action.

Sect. 13. This act shall take effect from its passage.

Approved, June 12, 1860.

AN ACT

In addition to an Act concerning Contagious Diseases among Cattle.

Be it enacted by the Senate and House of Representatives, in General Court assembled, and by the authority of the same, as follows:

Sect. 1. In addition to the commissioners appointed under the provisions of chapter one hundred and ninety-two of the acts of the year one thousand eight hundred and sixty, the Governor, by and with the advice and consent of the Council, is hereby authorized to appoint two additional persons to constitute, with those now in office, a board of commissioners upon the subject of pleuro-pneumonia, or any other contagious disease now existing among the cattle of the Commonwealth.

Sect. 2. When said commissioners shall make and publish any regulations concerning the extirpation, cure, or treatment of cattle infected with, or which have been exposed to the disease of pleuro-pneumonia, or other contagious disease, such regulations made by the Selectmen of towns, and Mayors and Aldermen of cities, upon the same subject matter, and the operation of the regulations made by such Selectmen and Mayors and Aldermen shall be suspended during the time those made by the commissioners as aforesaid shall be in force. And said Selectmen, and Mayors and Aldermen, shall carry out and enforce all orders and directions of said commissioners, to them directed, as they shall from time to time issue.

Sect. 3. In addition to the power and authority conferred on the Selectmen of towns, and Mayors and Aldermen of cities, by the act to which this is in addition, and which are herein conferred upon said commissioners, the same commissioners shall have power to provide for the establishment of a hospital or quarantine in some suitable place or places, with proper accommodations of buildings, land, et cetera, wherein may be detained any cattle by them selected, so that said cattle so infected or exposed, may be there treated by such scientific practitioners of the healing art as may be appointed to treat the same. And for this purpose said commissioners may take any lands and buildings in the manner provided in the twelfth section of the act to which this is an addition.

Sect. 4. The Governor, by and with the advice and consent of the Council, is hereby authorized to appoint three competent persons to be a Board of Examiners to examine into the disease called pleuro-pneumonia, who shall attend at the hospital or quarantine established by the commissioners mentioned in the foregoing section, and there treat and experiment upon such number of cattle, both sound and infected, as will enable them to study the symptoms and laws of the disease, and ascertain, so far as they can, the best mode of treating cattle in view of the prevention and cure of the disease, and who shall keep a full record of their proceedings, and make a report thereon to the Governor and Council, when their investigations shall have been concluded: *provided*, that the expense of said board of examiners shall not exceed ten thousand dollars.

Sect. 5. The Selectmen of the several towns, and Mayors and Aldermen of the several cities, shall, within twenty-four hours after they shall have notice that any cattle in their respective towns and cities are infected with or have been exposed to any such disease, give notice in writing to said commissioners of the same.

Sect. 6. The commissioners are authorized to make all necessary regulations for the treatment, cure and extirpation of said disease, and may direct the Selectmen of the towns, and Mayors and Aldermen of cities, to enforce and carry into effect all such regulations as may, from time to time, be made for that end, and any such officer refusing or neglecting to enforce and carry out any regulation of the commissioners, shall be punished by fine not exceeding five hundred dollars for every such offence.

Sect. 7. The Commissioners may, when in their judgment the public good shall require it, cause to be killed and buried, any cattle which are infected with, or which have been exposed to said disease, and said commissioners shall cause said cattle to be appraised in the same manner provided in the act to which this is in addition; and the appraised value of such cattle shall be paid, one-fifth by the towns in which said cattle were kept, and the remainder by the Commonwealth.

Sect. 8. Whoever shall drive or transport any cattle from any portion of the Commonwealth east of Connecticut river to any part west of said river before the first day of April next, without consent of the commissioners, shall be punished by fine not exceeding five hundred dollars, or by imprisonment in the county jail not exceeding one year.

Sect. 9. Whoever shall drive or transport any cattle from any portion of the Commonwealth into any other State before the first day of April next, without the consent of the commissioners, shall be punished by fine not exceeding five hundred dollars, or by imprisonment in the county jail not exceeding one year.

Sect. 10. If any person fails to comply with any regulation made, or with any order given by the commissioners, he shall be punished by fine not exceeding five hundred dollars, or by imprisonment not exceeding one year.

Sect. 11. Prosecutions under the two preceding sections may be prosecuted in any County in this Commonwealth.

Sect. 12. All appraisals made under this act shall be in writing, and signed by the appraisers and certified by the commissioners, and shall be by them transmitted to the Governor and Council, and to the treasurers of the several cities and towns wherein the cattle appraised were kept.

Sect. 13. The provisions of chapter one hundred and ninety-two of the acts of the year one thousand eight hundred and sixty, except so far as they authorize the appointment of commissioners, are hereby repealed; but this repeal shall not affect the validity of any proceedings heretofore lawfully had under the provisions of said chapter.

Sect. 14. The commissioners and examiners shall keep a full record of their doings, and make report of the same to the next Legislature, on or before the tenth day of January next, unless sooner required by the Governor, and the said record, or an abstract of the same, shall be printed in the annual volume of Transactions of the State Board of Agriculture.

Sect. 15. The Governor, with the advice and consent of the Council, shall have power to terminate the commission and board of examiners whenever in his judgment the public safety may permit.

Sect. 16. This act shall take effect from its passage.

Approved, June 12, 1860.

TO KEEP TIRES TIGHT ON WHEELS.

The following, if reliable, will prove valuable. A correspondent of the *Southern Planter* says:

"I ironed a wagon some years ago for my own use, and before putting on the tires, I filled the fellies with linseed oil; and the tires have worn out, and were never loose. I ironed a buggy for my own use, seven years ago, and the tires are now as tight as when put on. My method of filling the fellies with oil is as follows; I use a long, cast-iron oil-heater, made for the purpose; the oil is brought to a boiling heat, the wheel is placed on a stick so as to hang in the oil, each felly one hour for a common-sized felly.

"The timber should be dry, as green timber will not take oil. Care should be taken that the oil be not made hotter than a boiling heat, in order that the timber be not burnt. Timber filled with oil is not susceptible to water, and the timber is much more durable. I was amused, some time ago, when I told a blacksmith how to keep tires tight on wheels, by his telling me it was a profitable business to tighten tires, and the wagon maker will say it is profitable to him to make and repair wheels, but what will the farmer who supports the smith and wheelwright say?"

For the New England Farmer.

CAUSE OF BARREN GRAPE VINES.

In the *Farmer* of Oct. 20th, 1859, is a communication from "B. C.," Burlington, Vt., giving an account of a grape vine that blossomed, yet bore no fruit. In your reply you recommend that a fruitful vine should be planted beside it, for the purpose of impregnating the barren vine.

Permit me to suggest that your plan would not produce the desired result. I have seen hundreds of such vines, and in every instance have found them wanting in the pistil or female organ.

All the vines "B. C." can plant around his vine will never cause it to bear a single grape. As the season for the blossoming of the grape is near at hand, "B. C." will, by comparing the flower of his vine with that of a fruitful one, see the difference. It is easy to be distinguished by the naked eye. I send you a drawing of the two flowers.

Perfect. Imperfect.

Winchester. E. A. BRACKETT.

REMARKS.—Our correspondent is undoubtedly correct in his statement and illustration, as the inquiry of "B. C." and others led us into an examination of the cause of barren grape vines, and we found the fact as stated by him. We have had the flowers drawn greatly magnified, giving a clear view of their formation. The cut above very well illustrates the difference in the flowers.

PURE MILK.

Hall's Journal of Health for May contains the following account of an association which exists in the vicinity of New York for the supply of metropolitans with pure milk:

"Within two years, a few gentlemen farmers who had friends and relatives in the city appropriated ten thousand dollars towards a plan for furnishing them pure milk, fresh from farm-house cows, within a few hours of the milking, and at the same price with the swill article. The friends of their friends availed themselves of the opportunity, until it has now become a business, and the demand is at times greater than the supply. But for the purpose of keeping to the mark of their original determination to supply pure milk only, and it being necessary to have a number of irresponsible employees, it has been found indispensable to institute extraordinary means of watchfulness. A special agent comes to town with the milk every day; and more, under his eye the milk is poured into cans on which are placed in metallic letters the name of each patron; the can is then locked, the patron having a duplicate key. Further, the agent is at pains from time to time to inquire of the customers if there is any fault to be found with the milk or the milkmen.

But the farmers themselves, being in independent circumstances, could not be expected to milk their own cows, and must employ hirelings; the general agent has found it necessary to watch these, and inspect the milk as it is delivered at the railroad station, thirty miles from the city. Within a few weeks the milk of one of the oldest, richest and most honorable-minded members of the association was found to be largely thinned with water. The member was promptly and fearlessly acquainted with the fact, and that the matter must at once be investigated. Knowing his own integrity, this gentleman did not knock the agent down, but promptly sifted the matter, and ascertained that only that once 'the boys' had accidentally spilled the milk, and thought to cover their negligence by adding an equal amount of water.

This milk is delivered in New York twice a day. It is received by the agent, warm from the cows. It is next stirred until the whole is thoroughly cooled; it is then surrounded with ice and sent to the city. Thus the milk is uniformly rich, is not partially converted into butter by the jolting of transportation, and a drink of it is perfectly delicious to a citizen."

THE CATTLE DISEASE.

Some developments have taken place since our last paper was issued, in relation to the sickness among cattle, and among them is the intelligence that it has appeared in New Hampshire. This intelligence is not based upon rumor, but upon well authenticated facts. We have seen the certificate of the physicians who examined the heifers killed at Hillsborough, which were sent from East Lexington. They have no doubt of the genuineness of the disease in those animals. There are statements that it has appeared in other towns in that State, but we will not anticipate any calamity. It is sufficiently impressive, without a particle of exaggeration.

We have been informed by the Commissioners that the disease has appeared in *twelve* different towns in this State.

Some additional light dawns upon us, also, from across the water. We have an interesting article before us from the *North British Agriculturist*, published in Edinburgh, Scotland, which says "there are very few practical men who do not believe that the disease is contagious, and who generally satisfy themselves that when the disease does appear in their stock, it is to be traced to some recent purchases in market, or by their animals having come in contact with affected animals, or from substances, such as straw, which have been in contact with diseased animals.

In several English counties—especially those around London, and in the counties of Derby and Chester, the disease has been very prevalent during winter and spring. It is also prevalent in dairies in the Lothians, more particularly the dairies in Edinburgh. The stock affected are principally cows, which have always been more subject to pleuro-pneumonia than other cattle."

We are sorry to observe that some of our people are disposed in the first place to find fault

with the action of the Legislature, by suggesting very wise counsels *now* as to what ought to *have been done*, and then condemning the Commissioners for doing just what they were instructed to do. Some of them quote the promptness and energy of the British government when the disease has invaded that country, but do not tell us from what source they derived their wisdom. On the other hand, the writer in the *North British Agriculturist* commends the energetic and decided action of our State in this matter. It says:

"In reference to the introduction of the disease into America, it is seldom that such direct and conclusive evidence as to the contagious character of pleuro-pneumonia has been presented, as is furnished in its introduction into the State of Massachusetts. Had the British Government been equally prompt on the first appearance of the disease in this country, it may be safely inferred that its spread would have been greatly checked, or perhaps wholly prevented."

There is another class of persons, including some of the cattle dealers, who purchase cattle to fatten and sell again, who are so mercenary and entirely incapable of appreciating an unselfish motive or a generous act, that they have denounced in billingsgate terms those who have watched the progress of the disease, who have done everything in their power to arrest it, and to prevent a panic among the people. These men found the price of cattle low in consequence of the disease, and their inordinate cupidity prompted them to make large purchases, at extremely low prices. They made brawling boasts of this in connection with their denunciations of others, until the disease began to turn towards *their* possessions, when they suddenly became as dumb and crest-fallen as they were boisterous before. This is the usual course with persons whose desire for gain overrides all the promptings of principles.

On Saturday, June 2, we visited the remaining portion of Mr. Chenery's herd at Belmont, 39 in number, and with many others examined the heifer and cow that were then slaughtered. The following statement of the examination we copy from the *Journal*, whose reporter was on the spot.

It was mainly with the view of developing the disease in a new and different aspect from that presented in the incipient and acute cases at Brookfield that the examination of subjects in this herd was made. Upon the arrival of the Commissioners a yearling calf was selected from a number of others as a fit subject to illustrate the effects of the disease in cases where the animal has been sick, and to all external appearances has recovered. The calf was taken sick in October last, and for four or five weeks was so ill as to take no other nourishment than gruel poured down its throat. During the last three months the creature has gradually regained its appetite and consequently its strength, and was supposed to be recovering. Still it coughed, and upon percussion exhibited dullness on the right side, and strong tubercular respiration.

The necessary preparations having been made, Mr. Commissioner Lothrop introduced Dr. Martin, who stated in brief his diagnosis of the case. He expected to find the most disease in the right lung, and no doubt adhesions. The calf was killed, the right shoulder and ribs removed, and the chest laid open by Drs. Dadd and Thayer. There was a strong adhesion of the pleura of the lung to the ribs, diaphragm and heart case. The lung indicated that it had been compressed into a small compass, by serum, which had in the subsequent progress of the disease been absorbed. The windpipe contained a secretion of mucus, which probably produced the rattling heard before death; the membrane of the lung was very much thickened, and the lung tissue nearly destroyed. The cyst or bag of the lung was found empty, whereas in cases of the disease in an acute form it has been found to contain a large body of lung tissue, or the substance of the lung. The theory of those most familiar with the prevailing disease is that the tissue in this case had been softened, and reduced to a liquid state or pus, and then taken up by absorption. The left lung was found to be perfectly free from the disease. The case was not a fair sample of the disease, but it nevertheless demonstrated the theory of the commissioners that cattle once sick will never fully recover.

The next animal killed was a cow, which was brought into Mr. Chenery's herd in December last. She had never exhibited any signs of disease beyond a slight cough, and an external examination before death failed to discover any indications. As the animal had been exposed to the infected herd, it was a matter of curiosity to ascertain whether she had taken the disease. Upon a careful dissection of the lungs the disease was found to exist in an incipient stage. The heart was soft and flabby, as in all cases of this kind, and there were other indications of the prevailing contagion. This closed the investigation.

CAUSES OF RAIN, SNOW, HAIL, FOG.—Rain is caused by a cloud moving into a stratum of cold air, by which its particles are condensed, and run into drops too heavy to float in the atmosphere. Snow is produced by the cloud becoming frozen before its particles have condensed into water. Hail is caused by the freezing of the drops after they begin to fall as rain. Dew is the falling of their vapors of the day, when they part with the moisture in the cool of the evening. A fog is a cloud floating on the surface of the earth, and a cloud is a fog floating in the atmosphere.

AMERICAN GUANO.—A correspondent, in speaking of the American guano as a fertilizer, says:

About ten days ago I scattered a portion of this article on an old grass-field. I hastily marked out some characters, and sprinkled on the guano by the marks. To-day, where I sprinkled the guano, the words "American Guano," are distinctly visible, in bright green letters, which can be easily read an eighth of a mile off. Certainly this is a very satisfactory result.

For the New England Farmer.

IS FARMING PROFITABLE?

What is the most Profitable Crop to Raise in this State?—Rotation of Crops.

MR. BROWN:—For 28 years I have been experimenting in order to systematize agriculture, so as to produce a desirable result, with a reduction of labor and expense. How well I have succeeded, you can best judge by looking at a *page* of my experience. Perhaps I may give some clue to an answer to the question at the head of this article. First, I will take a course of crops for one acre of land for 7 years:

LAND.	DR.
Manure	$40,00
Plowing and harrowing	3,50
Compost, ashes, &c., for hills	3,00
Planting and clearing	5,00
Harvesting crop	5,00
Harrowing and sowing rye before March 20th	1,50
1½ bushels rye, at $1 per bushel	1,25
2d year, in March, 10 lbs. western clover, $1, 1 pck. herds grass seed, $1, ½ bush. R. T., 50c, sowing 25c	2,75
Harvesting rye	5,00
2 bush. plaster, sowed 3d year, in March	1,00
Getting hay 5 years, 2 crops clover	17,00
	$85,00

LAND.	CR.
Corn crop	$65,00
Rye and straw	30,00
8 tons of hay, at $15 per ton	120,00
After feed	7,50
	$222,50
Deduct expense	85,00
Years 7	$137,50
For use of land per year	$19,64

Corn may now be planted with manure as before, or potatoes, as follows:

LAND.	DR.
Plowing and harrowing	$3,50
Compost, ashes, &c., for hills	3,00
8 bush. moderate sized potatoes, at 60c per bush.	4,80
Planting and cleaning	7,00
Harvesting	5,00
Cultivating, harrowing and sowing rye	2,00
1½ bush. rye	1,25
30 bush. ashes and sowing	6,00
Grass seed as before	2,75
Harvesting and threshing rye	5,00
2 bush. plaster sowed as before	1,00
Getting hay 4 years	14,00
	$55,30

LAND.	CR.
Potatoes	$60,00
Rye and straw	30,00
5½ tons hay, at $15 per ton	82,50
After feed	6,00
	$178,50
Deduct expenses	55,30
Years 6	$123,20
For the use of land per year	$20,53

Now I am prepared to return to the corn crop with barn manure as before.

In this statement I have taken the lowest market price for hay, and have not taken the largest crop which I have raised. I have not, I think, but in two instances, used $40 worth of manure, frequently $30, and sometimes not more than $20 per acre. You can see, however, that the manure might be raised to $54, and not make but $2 a year difference in the income, even though the crop should be no larger than I have stated. In the second course, the ashes might be (doubled) 60 bushels, and make but $1 a year difference in the profit. I have received $60 for an acre of rye and straw, and more than $70 for the straw standing in the field, for braiding for bonnets. I have also raised double the quantity of potatoes per acre and sold for a much higher price per bushel. I have stated results which I think the great majority of farmers in this State may reasonably expect, if they will become familiar with, and carry into practice, the course which I have here described. I say familiar with, because the hands must be quick to perform, as well as the head clear to direct.

I will also state that when this course is followed and the work properly done, the land will be increasing in productiveness, instead of deteriorating. It may be thought that the same allowance for planting and clearing the crops is quite too small, but if a healthy active man cannot do it for that, he has something yet to learn in practical agriculture. I have allowed $1 per day for work, except getting the hay and rye, and farmers probably will differ as to the expense of harvesting these crops, according to their advantages for doing the work.

I will remark, in conclusion, that we can see the inconsistency of charging all the manure to the hoed crops, or even all the plowing and cleaning, as they require but little more labor than would be necessary to fit the land for reseeding for grass. I think a rotation of crops is the most profitable.

S. M. STANLEY.

West Attleboro', Mass., March 21, 1860.

"HORSE-POWER" AS A MEASURE OF FORCE.

The phrase or term "horse-power" is continually occurring whenever there is occasion to speak or write of the force of steam engines. It is met with almost daily in the reading of newspapers, and of books or periodicals relating to science and art. Is there one reader in ten who understands what is meant by this term, or who attaches any accurate idea of the amount of power intended to this oft-recurring phraseology? We very much doubt it, and think, therefore, that a brief explanation of this term, gleaned from Encyclopedias and scientific works, may be both interesting and useful to the generality of ordinary readers. The term "horse-power," then, is used as the unit of force in the description of steam engines. Instead of saying that an engine has a power of lifting or propelling so many pounds, it is said to be of so much "horse-power." The power exerted by a horse, is taken to be equal to the pull or lift of 33,000 pounds, at the rate of one foot per minute, as this has been found to be about the mean of a good many observations and experiments. It has been found, for example, that a pair of horses will draw a plow along with an average pull of 300 pounds, as shown by a dynameter, like common spring steelyards, at an average rate of 2½ miles per hour, or 220 feet per minute. Now, this is the same as if those 300 pounds were pulled over a pulley, or lifted that height in that time; and 300 pounds lifted 220 feet per minute, is just the same as 66,000 pounds, lifted one foot high per minute. The half of this performance of a pair of horses gives us 33,000 pounds, as the force of a single horse, and with this meaning it is used by engineers.—*Country Gentleman.*

HORSES NEED AIR AND LIGHT.

If anything can be done to add to the comfort and health of the horse, no animal deserves more to have such an effort made. Our stables should be constructed with special reference to his comfort and health, and to these all other accessories must yield.

Our fathers' and grandfathers' barns were of the wide, old-fashioned sort, with all manner of loop holes and air holes—between the vertical boarding you could put your whole hand. They were originally tight, but when well seasoned, there was light without windows, and the pure air circulated freely; here was perfect ventilation, and yet talk with those same men about the necessity of ventilating a stable, and they are ready to prove that they have kept horses all their lives, who did well, worked well, were always in fine health and spirits, and that a ventilator is only a fancy idea —one of the new-fangled notions of the present generation.

Our stables have been improved in architectural beauty, and in more permanent form of construction; they are pleasing to the eye, tight, proof against the wind and weather, and with solid walls of brick and stone, all of which the poor horse would gladly exchange for the pure, fresh air, of which he is now deprived.

In providing for the necessities of a horse, it would be well to ask ourselves, how we should like to be placed in the same situation. If it is healthy for a man to live day and night in a close, damp cellar or underground apartment, then it is healthy for a horse. If it is healthy for a man to live on the lower floor, in an unventilated apartment, with a manure and root cellar beneath him, whose pestiferous miasmas are penetrating every crack, mingling with the foul air he breathes, and rising still higher, permeating the food he consumes, then it is healthy for a horse. But why argue against barn cellars and ill-ventilated apartments? The proof is abundant to all who want it, and he that cannot be convinced, must cease to wonder why his horses have diseases of the skin, the lungs, the eye, etc., or the glanders, the grease, the scratches, and other diseases that are directly traceable to the impure atmosphere, in which he compels them to stand and breathe.

We would, therefore, in the construction of a stable, endeavor to provide against these evils. Build root cellars and other cellars entirely distinct from the barn—at least not directly under the horse stalls; let there be a free circulation of air under the floor, and particularly so throughout the stable apartments. Ventilate the horse stable through the roof, and entirely independent of the other portions of the barn; let the connection between the horse stable and the hay-mow be closed tight, except when hay is being delivered. Ventilate the carriage house through the hay-mow and roof.

Let your horses' heads be towards the side or end of the barn, and provide the head of the stall with a fair sized window; a horse wants, under all circumstances, whether tired, sick, or well, plenty of light. When there is light and plenty of fresh air, it is a common practice to turn the stalls the other way, and keep the horse somewhat in the dark. A good horseman knows that a horse enjoys light and air as much as he does himself, and he will thrive better in the coldest winter on the lee side of a hay-stack, than he will in a badly ventilated barn, however comfortable it may be otherwise. It is stated that if the gases exhaled from a horse's body were confined around him by a gas-tight bag, they would cause his death in twenty-four hours, allowing him at the same time to have his head out, and to breathe pure air.

If you want satin-skinned horses, in fine health and spirits, ready at all times to work, or to drive, a thorough system of ventilation will be one very important step towards it.

A manure shed should be built outside the stable, and sufficient only to afford protection from wind and rain, with a door connecting with the barn, and running to floor of stable, which should only be open when the stable is being cleaned. The exhalations of the manure heap are then not permitted to return to the stable—nor should any of the gases generated in the stable, be allowed to pass into the carriage-room or hay-mow.

As a matter of economy, it is just as cheap to build a stable calculated to give a horse the greatest amount of comfort, as to build it in any other way. Cellars are handy arrangements, and in the first cost it may be cheaper to put them under the barn, but a few years' experience will show the heaviest balance on the debit side.—*Cor. American Agriculturist.*

For the New England Farmer.

LETTER FROM THE SANDWICH ISLANDS.

MAKAWAO, MAUI, HEWAIIAN ISLANDS, JANUARY, 1860.

MESSRS. EDITORS:—*Gentlemen,*—I find myself entering upon a new year ere my communication for you is finished. Let me then say "A Happy New Year," to you who conduct, and to all who read the *New England Farmer.* May the blessing of God be upon you and the work of your hands. May each of you not only succeed in your temporal affairs, but may you, one and all, "sow to the Spirit, and of the Spirit reap life everlasting."

In my last, I had conducted you to Waipio valley, on our way to Hilo. Our way lay through the district of Hamakua,on the windward side of the island. In passing through this district we crossed many ravines, at first shallow, but growing deeper as we approached Hilo. We found no water in any of them. The country was covered with grass, and now and then a clump of trees, the kukui, the ohia, guavn, and a small sprinkling of orange. Hamakua seems well adapted to grazing purposes, though I saw very few cattle. Indeed, the district is but sparsely settled, and there is a great lack of fencing material. On entering the district of Hilo, we found the ravines still more numerous, but through most of them ran a sweet stream of water, some of them quite large. But for these ravines, Hilo would be a very valuable district, not only for grazing, but for agricultural purposes. The land is rich, and that part of it near Byron's Bay especially, will be in much demand. Ten miles ere we reached the bay, we found an enterprising American, who has a large tract of excellent land, on which he has a crop of sugar cane, and where he is erecting buildings for the manufacture of sugar. Between his place and

the bay we passed three sugar plantations, owned and worked by Chinamen, all in successful operation, making excellent sugar. On reaching the village of Hilo, once my place of residence, I found striking changes, twenty-seven years having elapsed since I left. These consisted in buildings; a fine meeting-house, school-house, stores, shops and dwelling-houses; in good roads; in gardens and fruit trees; in an increase of ships, chiefly whale-ships, visiting the harbor. I did not see that increase of industry among the native Hawaiians that I desired to witness. There was some improvement in their style of building, but there did not seem to be much agricultural improvement. The whale-ships, of which there were some sixteen in the bay while I was there, obtain wood, water and a few recruits, such as oranges, melons and a few vegetables, but their main recruits they seek at other ports.

From Hilo we took our way to Kau, the southern district of the island by way of Kilanea, the active volcano of Hawaii. The distance from Hilo to Kilanea, the volcano, is about 38 miles. And such a road! Scarcely an acre of arable land did we see after leaving Hilo. The whole country had, at a remote period of time, been overflown with lava over which lay our road, not always visible, though for the most part our horses succeeded in picking their way. At Olaa, about midway from the bay to the crater, there seemed to be a little oasis in this wilderness of pahoehoe, or fields of lava slabs. Here was a small village, with a native or grass meeting-house. I think some kalo, such as grows on dry land, is found here, and perhaps a few potatoes, though a plow could not be used. I was glad to find a plenty of fine guavas, and several orange trees, some of which were loaded with ripe fruit. Leaving this village, we pushed on to the house where those who visit the crater lodge over night. Here we staid, though the accommodations were primitive enough, the house being a grass one, and poor at that, minus of furniture and beds; a fire kindled in the middle of the room to give us two smoke to one fire. However, we mustered the tea-kettle which is used for travellers, both here and at Kilanea, and having made a cup of tea, we covered ourselves as decently as we could and got a little sleep; rose early and pushed on for Kilanea. Till within two or three miles the way was gradually ascending as it had been from Byron's Bay, and rough. We then reached a plain of coarse sand, over which our beasts galloped and soon brought us to the far-famed crater of Kilanea. Of this let me tell your readers something.

At an early hour in the day we reached the northern bank of Kilanea, from which we so overlooked the crater that we could see all below at a single glance. As we were in need of water for washing and breakfast, our guide, a son of Rev. D. B. Lyman, of Hilo, led us to the pools of water near by caused by the steam which was constantly ascending from the fires in the pit through chasms in the bank. The steam and vapor were immediately condensed into drops of water by cool mountain air, and dropped into little basins formed by the lava. The water had collected into small pools, deep enough to allow of being dipped out with a cup, and was so warm that we could scarcely bear our hand in it. The steam and vapor were also uncomfortably warm, nearly taking away one's breath, so to speak. On becoming cool, we found the water sweet, and we used it for our drink. But for this provision of nature, it would be much more inconvenient for travellers to remain at Kilanea long enough to investigate the wonders of the place.

We next visited the sulphur banks at the northwest corner of the crater. A good path led us there over a tract of decomposed lava, on which grew ohelo bushes, a species of whortleberries which, in the days of Hawaiian superstition, furnished offerings to Pele, the goddess of the volcano. The banks were some thirty feet high, and perhaps four hundred feet long and seventy-five feet broad. The ground was rent by fissures through which the smoke and vapor were continually ascending. We could hear the roaring of the fires beneath, and the vapor ascending through the fissures was too hot to be endured. The banks were covered with sulphur, and some of the crystallized specimens which adhered to the rocks were beautiful. We found specimens of sulphate of ammonia. Salts are sometimes gathered here in considerable quantities, and used for medicine. Strong, but dirty.

We then descended into the crater of Kilanea from the south side, not without difficulty, for the banks are steep. There had been a great deal of travel, so that the path was well defined, and we reached it in safety, and paused on the edge of this fearful pit, one thousand feet deep on this northern side. The north part of the crater had the appearance of a lake three miles square frozen over, thawed in part, and the huge cakes of ice driven by the wind till quieted by another cold night. The whole area had been a mass of melted lava which had been boiled and dashed violently against the sides of the crater, which are here perpendicular. In cooling they had left huge slabs of lava, some lying flat, others edgewise, and some piled on each other. Over these we walked with caution, as there were many fearful crevices, some so wide that we leaped them with difficulty, and very deep. After walking about two miles we reached a lake or chaldron in vigorous action. It was sunken some twenty feet, I judge, below the bottom of the crater. We stood on the ledge above, and for two hours watched the playing of the fearful element below. At one time there were three fountains playing near the outer edge of the lake boiling with intense heat, and throwing their jets high in air, like the surf breaking on the shore. Then, again, nearer the crater of the lake, a bubble would rise to the top or surface of the crater and break. Then another and another, till it became a spot, say a rod square, of boiling lava throwing its jets higher and higher, and increasing in size, till quite a large area would boil and roar and throw its angry waves on every side, and to the height of perhaps fifty feet. Then it would subside gradually, till in a few minutes all would be quiet. At another time the whole area seemed to be in motion, and moving in several directions, meeting, overlapping each other, till, opening in some particular place, huge cakes of hardened lava would be sucked in and disappear, as would a sheet of paper in a furnace of fire. The sight was grand and fearful, and we left with admiration of the dread power which kindled and sustained these fearful internal fires. No thoughtful man

can look upon this display of the power of God without awe. Well is it said that our "God is a consuming fire," and that "it is a fearful thing to fall into His hands." May we, one and all, be prepared for the day of God which seems to be prefigured by the fires of the volcano. More anon. Yours, with much respect,

J. S. GREEN.

For the New England Farmer.

FARM NEATNESS---PREMIUMS.

Neatness no farming! Why not, Mr. Editor? Is not the farmer one of the "lords of creation," and should he not be a pattern of every thing that is neat, honest, high-minded, upright, true as steel to principle, whose word is a bond, and whom society can illy afford to lose? Neatness in farming! where can a better field be found for the display of this virtue than on the farm? To make out my case, I will ramble over a few things. In reading over the different reports of our county agricultural societies, one thing in particular has struck me as decidedly wrong in the arrangement of their premium list. I mean this: Here are two men in the same town, and it may be, side by side. One has the most ample means at his command for the purchase of the most approved implements, manure and help; everything about his farm is conducted on a liberal scale of expenditure. With ample means at his command, everything about his farm is accomplished in the most thorough manner. Now for the neighbor. He may hold his farm free from debt, but probably not—no means at command, but his two willing hands, and a clear brain; with these he goes to work to obtain the capital necessary to bring out the resources of his farm, and he does it. Comparing his farm with what it was when he first took hold of it, it would scarcely be recognized; improvement and thrift is stamped upon every field, fence and building; a diligent hand and a thinking brain is everywhere apparent. These two men offer their farms for premiums; which of the two usually gets it? Not the latter, though taking into consideration all the circumstances attending the two farms, his is as far ahead of the former, as the difference was between their purses at the commencement. The latter may possibly get the second premium awarded him, though justly entitled to both. Is there any fancy about this? Read over the different reports for the last five years, and not only will this be found generally true, but it will hold good in regard to many other things. For instance, what is to prevent farmer number one from producing a premium crop of corn or carrots? Money goes a long way in farming, as in everything else; it is a power in itself considered. Let any one interested, look over our own Norfolk County agricultural reports from its first show down to the last, and they will please observe that the great bulk of premiums have been awarded to a very few persons. There is a desire to see the whole premium business placed on a more just and equitable plan, though, for aught I know, it may be impossible to better the present system. I am in doubt about it, however. I wish to see our societies hold out greater encouragement to the smaller and poorer class of farmers, with a reasonable prospect of success to them.

But to my text. Neatness in farming! Is it possible for a farmer to be successful in his operations, without neatness, system, and a place for every thing, and every thing in its place? and he should see that these things are carried out by each and every person about the establishment. It takes less time to be neat and systematic, than to be slovenly, and a "hilter skilter" method of doing things. There is a charm about a neat, tidy, orderly looking farm, however humble the buildings may appear, which always pleases. I do not wonder that many farmers' sons hurry to be off from the old home; its appearance, compared with the city and its surroundings, either from what he has seen, heard or read, disgusts him. He longs to be somebody, and to be thought something of, which he feels he never will be, as long as the old farm remains in its present condition. If parents expect to keep their sons and daughters at home, they must strive to make that home the happiest and pleasantest place in all the world; and if this is done, they will remain at home and love it, because it is lovely. There is an instinctive love of the neat and beautiful, in every human bosom; a child appreciates this long before it can talk. Now, ye farmers, make your homes pleasant, and have every thing about your establishment arranged with taste, suitable to your means. Consider no cost too great, which makes home happy, and your wife and children contented. It is not all money that is wanted to accomplish so desirable an end. A piano and costly furniture will not do it, though all proper enough under some circumstances; but it is the thousand and one little and great things which all must attend to in-door and out. O, for a pen for the people, which would arouse them to an appreciation of the blessings and privileges which surround them, particularly in the case of the farmer.

King Oak Hill. NORFOLK.

NEW PUBLICATIONS.

MILCH COWS AND DAIRY FARMING. By CHARLES L. FLINT, Esq.

We have before us a new edition of this popular work, which "comprises an account of the breeds, breeding, and management in health and disease, of dairy and other stock; the selection of milch cows, with a full explanation of Guenon's method; the culture of forage plants, and the production of milk, butter and cheese; embodying the most recent improvements, and adapted to farming in the United States and British Provinces," &c.

This work contains a large amount of information which must be valuable to most persons engaged in stock-raising, or in any department of the dairy. It is illustrated with numerous engravings of some of the finest cattle of the country, is well printed on thick, fine paper, and will be worth many times its cost to most farmers who do not own any similar work on the subjects considered. Published by Crosby, Nichols, Lee & Co., Boston.

THE HORTICULTURIST for June is an interesting and valuable number.

THE DRAGON-FLY, (Libellula.)

This is the interesting little insect generally known throughout New England as "*The Devil's Darning Needle*,"—of whom all country children have heard as the "critter" that would come and sew their mouths up if they indulged in making naughty speeches. The French call them *Demoiselles*, and the Germans, *Wasserjungfeen*, (Virgins of the Water.)

Jaeger, in his *North American Insects*, says the dragon-flies are hardly ever seen at rest, but are in continual motion, flying past us almost as

quick as lightning, and winging their way through the air, over gardens, meadows, rivulets and ponds. The water is their birth-place.

"Instead of being mild and gentle, like the butterflies or other winged inhabitants of the air who draw their nourishment from fruits and flowers, these insects are savage beasts of prey, merciless assassins, who plow the airy waves for no other purpose than, falconlike, to catch with their claws all kinds of winged insects that they meet, and devour them with their powerful jaws.

"It is, however, in this, their murderous character, and rapacious habits, that their chief use to man consists; for being themselves directly incapable of injuring him, they rid him of insects that are directly capable of annoying him by biting and stinging. Thus, if a few dragon-flies be shut up in a house for only a short time, they will effectually purify it of all flies, mosquitos, or other troublesome blood-suckers.

"The dragon-fly, which may be handled by man with perfect impunity—for it cannot bite or sting, or poison him—is often a source of terror in a house or garden, where it might be extremely useful in destroying mosquitoes if allowed to remain."

These insects are not only usful to man in destroying those that devastate his crops and annoy his hours of repose, but they are exceedingly interesting in some of their habits, and especially in that of securing their food. Please listen:—In a calm summer afternoon towards the last of June, or in July, at about five o'clock, sit down on the bank with your face to the West, and have a hill of corn or some other springing plant between you and the setting sun. What do you see? Not anything. Observe yet more closely. What was that—a shadow? Again and again—it cannot be a shifting shadow, it is too rapid for that. See! it passes quicker than lightning, if possible! Look a little farther off. Ah! I see it now—there is the Dragon-fly, poised in the air, apparently as motionless as death, with wings outstretched, just as they are represented in the engraving above. What *can* he be doing, so motionless, hanging in the air! He is—but he is gone! What could have struck him out of existence so suddenly? Look on the other side of the corn. O, there he is, just as still as ever. He is watching his prey. Now look between yourself and the sun and you see insects darting off from the hill of corn, so small that the eye would not discern them unless in that peculiar light. They dart from the corn, make a few gyrations and back again, that being the boundary of their travels, and, alas, too often the boundary of their little life. The dragon-fly does not rest suspended in the air without an object—and every time he passes back and forth, one of the tiny dwellers upon the corn goes to make up his evening meal.

Will not these suggestions induce many to study the habits of, and become more familiar with, the beautiful and harmless dragon-fly?

THE THISTLE BUTTERFLY, OR PAINTED LADY.

This insect will probably be recognized by most readers, as a gay, beautiful thing. It is very common in the United States and in Europe,

where it goes by the name of the "Painted Lady." It sometimes appears in such numbers that their

larvæ devour not only the leaves, but also the blossoms of the thistle and burdock. As soon as one of these caterpillars issues from the egg, it draws the points of two leaves together, fastens them with a silky thread, conceals itself therein, and eats the substance of it until it attains its growth. We are not aware that it injures any of our crops.

THUMB AND FINGER PRUNING.

Now is the precise season, say from June 15th to July 10th, to perform one of the most important operations in the apple orchard; that of removing the young shoots which started in the spring, and have made a growth of from one to six inches in length. These shoots start out mostly on the upper side of the large branches, grow with great rapidity, and if not arrested early, form that part of the tree which it is the most dangerous to cut off. If they are allowed to grow two or three years, they are sometimes an inch through at their base, and cannot then be removed by saw or knife without leaving an ugly scar upon the tree, and the wound becomes a dangerous one, unless made when the tree is in a favorable physiological condition, and it is treated with proper skill.

It is *natural* for apple trees to throw up a thick, bushy head. Whoever saw one that sprang from the seed in a pasture, and that had not been fashioned by the hand of man, that presented any other form? This original impress seems to retain something of its power even after the tree has been budded or grafted, so that it requires the constant watchfulness of the orchardist to train his trees into those forms that make them the most convenient for cultivation, and for the harvesting of their fruit. In order to do this it must be remembered that all our budded or grafted trees are in an artificial condition; they have lost much of their original character by the process of moulding them to the will and purposes of man. It is just so with the peach, plum, potato, celery, and many other plants. In changing them as we have, they have probably lost something of their native hardihood and vigor, and will always require more attention than trees in their natural condition.

The summer pruning is a part of the artificial process.

There should be little use for the saw or knife in an orchard less than forty years old, unless in case of accident; after that time, or perhaps ten years later, some of the limbs begin to die, and then these tools become necessary. The pruning should be performed when it can be done with the thumb and finger,—and now is the time to do it. Pass through the orchard, examine all the limbs that start directly from the main stem of the tree, and wherever young shoots are found rub them off, being careful to take them so close as to prevent an after growth. They should all come off, with a single exception, viz.:

If the tree, by accident, unskilful pruning, force of wind, or any other cause, has lost a proper balance, if one side has more branches than another, or if the top is open, and too much exposed, then leave one of these young shoots, and train it to occupy the very place you wish to have filled.

By this process of pruning, you will rarely need to use the knife; the trees may be brought up smooth, and with symmetrical form, and they will not be full of internal wounds to weaken them, and hasten their decay in later years.

Let us urge upon the young orchardist, at least, to try this method NOW, and if the knife and saw are necessary, NOW is the time to use them.

For the New England Farmer.

MOWING MACHINES.

Notwithstanding the many trials of these implements, and the many varieties before the public, it is not easy for a person to satisfy himself, what kind of machine he had better buy for use on his farm. I was struck with this consideration, on reading the remarks of Mr. N. W. Brown, of Topsfield, which came to hand to-day, in the monthly *Farmer* for June, p. 280. Mr. B. I know to be a practical, sensible man, and he is situated on an experimental farm, well adapted to try implements, if not to produce large crops. He appears to have a preference for the Manny machine, which he learned in the use of it at the West. I know of good farmers, hereabouts, who have a like preference. There are others who prefer Allen's, and some who think there is nothing that will compare with the Buckeye. Can't you, Mr. Editor, honestly inform the public of Massachusetts, what kind of mowing machine is best adapted to their use? If you will do this, you will save much perplexity of thought, and much of the money of your brother farmers. P.

June 4, 1860.

REMARKS.—No, sir, we cannot say which is *the best* mowing machine among all that are used. We have had practical experience with only three or four out of the dozen in use, and do not feel justified in giving opinions of them until we have used them under our own hands. If we were perfectly clear in opinion as to which the best mowing machine is, in all respects, we should certainly say so, without "fear, favor or affection."

☞ Pigeons are very plentiful in the northern part of Michigan. One man at Grand Rapids has shipped 164 barrels to the eastern markets this spring, paying over $1500 for dressing, express charges, &c. Another person has shipped 52 barrels, making over 100,800 birds. At one shot, 120 were brought down while roosting at night.

AN AXE TO GRIND.

Not one of your political ones, by any means, of which we hear so much just now, but a real cast steel chopping axe, that has stood in the wood-shed and been used whenever any of the men folks or the women folks have had occasion to hack, hew or split, during the past winter. Just see how blunt and thick the "edge" is. What a grinding it must have!

But the grindstone—that is as bad off as the axe is. True enough, you did resolve, as your boys turned so reluctantly, and looked so tired and disheartened, while grinding the scythes last haytime, that you would have a better stone with some of those friction rollers, and, perhaps, with a treadle so as to be turned by the foot. But you have not got it yet. That same little, worn-out, hard-faced grindstone stands there still, with a frame so low that a small boy must bow his shoulders almost to his knees to reach the crank which turns a gudgeon that must be kept wet or it will squeak and groan dreadfully. What a thing that is to grind a dull axe on. What a place, too, for your boys to take first impressions of agricultural labor, such an old grindstone is!

If the single experience of young Ben. Franklin, one cold morning, in grinding an axe, has added to the vocabulary of politicians one of their most expressive phrases, who will venture to compute the number of sea voyages that have been planned by farmers' boys at the crank of some old grindstone, or of resolutions formed there to be merchant, mechanic, peddler, anything, so that they shall not be obliged to grind dull axes on miserable grindstones.

Much is said, now-a-days, and well said, about the duty of striving to make farm-life as attractive as possible. But it seems to be one of the weaknesses of human nature, in this as in other cases, when looking about for the means to be used in securing a desired object, that we are prone to neglect those little every-day ones with which our work might be easily and cheaply commenced, and to fasten our eyes and hopes on something great and striking, and stand still till it comes; in plain words, the rickety, worn-out grindstone is neglected and overlooked, while we are waiting for the mowing-machine or the steam-plow to relieve us from the drudgery of hard work, and to make our business agreeable.

But, as yet, axes, scythes, shovels and hoes, are used upon the farm; and our argument for a good grindstone will be appreciated by all who know the difference in the use of these implements when sharp and when dull.

In looking over the premises of our agricultural friends, admiring improvements that have been made, and discussing those that are projected, we instinctively look for the grindstone. If we find it an ancient, sad-looking affair, with wooden gearing, and leaning, it may be, against the wall for support, we feel like saying what the proprieties of the occasion would not warrant. But if the grindstone is nicely housed, hung on well oiled rollers, and with a treadle, so that one man can sharpen a tool without raising his neighbors or coaxing his wife to turn "just one minute," we feel assured that all is right. Depend upon it, as goes the grindstone, so goes the whole estate.

For the New England Farmer.

FARMING IN KANSAS.

Still but very little rain. But we are now having our March winds, perhaps April showers will soon follow. Very few gardens have, as yet, been planted, May 29, and if the rain does not befriend us, we shall be compelled to forego our vegetable dinners this season. The Yankees here do not relish the idea of going without the Yankee dish of "biled vittles," and the probability of it makes them pray most earnestly for rain. Principally corn and potatoes have been planted, and then but half of the usual quantity will be raised this year. Wheat and oats entirely destroyed. It is lamentable, as a large quantity was sown last fall. We seem to suffer more from the drought in Atchinson county than elsewhere, as reports from other counties speak of some rain, and corn to be growing finely. Many are the probable reasons given for this dryness, and the more ignorant and superstitious charge the telegraph, which has lately been passed through this country to Atchinson, with preventing the rain from falling, and so insist upon having the wires pulled down; for, say they, "when the telegraph was first put up in Missoury, thar' was nary rain the mor'n two year, and then the people pulled for wires down, and we had a powerful rain right away. Telegraph wires aint of nary use, anyhow." It is most amusing to hear their arguments, confirming their belief, that the telegraph wires have a visible effect upon the atmosphere.

"*Is Farming Profitable?*" I have had my attention much excited by the number of articles upon this subject in the *Farmer* lately. Mr. Pinkham labors earnestly and intelligently to prove that farming is not profitable, and that every farmer loses $10 per acre for every acre of corn he raises. A number of other correspondents differ with him, and prove that they make a profit of $14,72 to $25 per acre.

Mr. Pinkham is certainly in a bad fix, and I think that he is out of his element, that farming is not his *forte*, and that he was cut out for a shoemaker, or something else better. Or, perhaps, he does not understand farming it upon an economical scale, and therefore labors day after day, under the conviction that he is losing money, as he certainly is, if he does not understand his business, and does not labor cheerfully and willingly. If he expends $47 upon one acre of land and receives only $37 back, he certainly has taken the "back track." I agree with him in his assertion of not coining wealth at his rate of farming, but think another correspondent, "Investigator," cannot get rich much faster, if he expends even

$37,54 upon one acre of land. He must work very hard and enrich the soil profusely with the sweat of his brow to realize a profit of $14,72 after that great expenditure. I showed the article to an old farmer, and after he had carefully perused it, he bluntly exclaimed, (I do not wish to offend,) "That's all a lie, he would sink a fortune at that rate." "Investigator" must either be a very slow worker or have a very poor team, if it takes him one day to plow one acre of land. Here we can easily plow three acres. His account gives one man one-half day to mark off one acre, when one man can mark off three acres here. "Done easily," the farmers say. Hoeing, plowing and hilling is unnecessary work here. "Investigator" estimates the wear and tear of tools at $4 per acre. He must be "death" on tools, or buy those of the poorest material and metal. It is an item we seldom estimate here, except in breaking prairie, and then it costs $2 per day. Yet we think that 50 cents will pay all damages done to tools on cultivated ground. But here is our estimate of a field of three acres:

THREE ACRES OF CORN.	DR.
To one man and one team of horses one day plowing	$3,00
To one man and one team one-half day harrowing	2,00
To one man one-half day marking, (easily done)	1,00
To planting and seed	1,00
To cultivating	2,00
To hauling in	1,00
To cutting up	2,50
To three days' husking	3,00
To wear and tear of tools	50
To shelling and marketing at 5 cents per bushel	9,00
	$25,00

The very lowest average of corn is 60 bushels per acre, although we often raise 75 bushels per acre. When corn was plenty, it could be bought at the field at 30 cents per bushel; now it is worth 75 cents. So we will raise it at the present price:

THREE ACRES OF CORN.	CR.
By 180 bushels of corn, at 75c per bushel	$135,00
By fodder sold	5,00
By 10 loads of pumpkins, at $1 per wagon-load	10,00
By 10 bushels of soft corn, at 30c per bushel	3,00
	$153,00

I make the total cost of three acres of corn to be $25 and the receipts for the same $153, leaving $128 profit from the three acres. This may seem enormous to an Eastern farmer, yet it is true, and I venture to assert that a poor farmer can realize $37 profit from every acre of corn he cultivates.

A farmer adjoining has 600 acres of land. He cultivates 140 acres in corn, and asserts that it only costs him $5 the acre. He cultivates a large vegetable garden also, and employs four men to cultivate the whole, paying them $15 a month. I have estimated the labor at $1 per day in my account. This man sold at the field last fall 2,700 bushels at 30 cents per bushel, and has sold corn at various prices during the winter. If he had kept all of his corn till now he would have realized a large sum. He has also wintered 40 head of cattle, 20 hogs, 2 horses and 4 mules.

Give a man two good horses, and he can cultivate 40 acres. A very old man near by cultivates 25 acres of corn, and says, "'taint hard, neither." He has quite a quantity of stock to attend to also.

Seventy-five miles from the river, corn is selling at 30 cents per bushel, and there, they say, corn costs 12½ cents per bushel to raise. Fodder we seldom sell. We put up a large quantity of hay. After the ears are stripped from the field, each farmer turns his whole stock into the field and there they remain until they have eaten up everything clean. So farming in Kansas is certainly profitable. SUSIE VOGL.

Sumner, K. T., May 29, 1860.

AGRICULTURAL LECTURES.

We have before us a pamphlet of nearly 200 pages, giving the outlines of the lectures delivered before the Agricultural Convention at New Haven in February last. They were reported by HENRY S. OLCOTT, Esq., and published at the time in the N. Y. *Tribune.* Mr. O. has since corrected his notes, and after a revision by the lecturers themselves, they are brought together in this form for general use. They contain a large amount of valuable and reliable matter which ought to be extensively before the people.

In one of Judge FRENCH's lectures upon Drainage, we notice an item against the slovenly and wasteful practice of *open ditches* which we cannot well refrain from laying before the reader. The extensive operations by draining, of Gov. Hammond, of South Carolina, were alluded to, and the reporter continues: "Two acres, if I recollect aright, of this corn-field measured ninety-eight bushels each, and the plantation crop amounted, in the aggregate, to about 56,000 bushels. This was raised on a swamp, just like many thousand other acres in South Carolina, but rendered thus fertile by open ditching. Gov. Hammond's experience goes to corroborate what yesterday Judge French said against open ditches. In one season, only, because of neglect to clean them out, the ditches filled up, so that on the 1500 acres the crop was shortened 30,000 bushels, and in one year more, a further loss of 15,000 was experienced."

These "Outlines" are published by Saxton, Barker & Co., New York, and we hope will find their way into the homestead of all our farmers.

ABOUT RINGBONE.

I noticed in a late number, an inquiry for the cure of what is called a ringbone, from a correspondent who had a fine mare troubled with one for something over a year, and the answer was, that there was no cure for a confirmed ringbone.

Now two years ago this winter, I had a fine colt that had a ringbone on each of its hind feet, and was so lame some of the time, that I could hardly get it out and in the stable. I did not do anything for it till spring, and they got so bad that the colt had to walk upon its heels, with its feet turned up, and I supposed that she was almost worthless. Finally one of my neighbors told me that he had a remedy for a bone spavin, and it was said to be a sure cure for ringbone, and wished me to try it

It was this: Take common salt, and pound or grind it as fine as you can possibly get it, and mix it with spirits of turpentine enough to make it something like paste, and rub it on the ringbones (or spavin) once in two or three days, for three or four times, and if they have not been of too long standing, I think you will effect a sure cure. This colt of mine had but three applications of this medicine, and I then turned her out to pasture, and she soon grew better, and in a short time was entirely free from lameness, and has been ever since. She is now coming three years old, and has as sound feet as any colt, though there are some bunches to be seen yet, but I think in two years more, they will entirely disappear.—*Cor. Country Gentleman.*

SCHOOLS OF AGRICULTURE.

BY JUDGE FRENCH.

There is much that can never be learned from books or oral teaching. No man can learn how to be a horseman, or swimmer, or skater, in any other way but by practice. So it is with all that belongs to the practice of the *art* of agriculture. To be able to direct others with authority, the farmer should have skill in all the manual processes of farming, to hold the plow, or to drive, to use the scythe, the ax and the hoe. There are a thousand things to be learned by the farmer in every department of his business, which can be learned only by actual observation on the farm, and which may be suggested in considering the plan of such an institution as we recommend. It may be premised, in the outset, that an experimental farm makes a part of almost every system of agricultural instruction that has ever been adopted in the old world, or projected in the new.

Dr. Hitchcock says, in his report: "With a very few exceptions,—I do not recollect any save the University of Edinburgh,—a farm, or at least a few acres of land, is connected with the school."

A school of agriculture with an experimental farm, we propose as the one thing especially needful in our present condition, to be established as soon as practicable in each county.

We should abandon, for the present, the idea of a splendid university, where everything, including the dead languages and abstruse mathematics are to be taught.

The existing institutions of learning are sufficient for Latin and Greek, and mathematics in general, and common schools, with perhaps some modifications with reference to preparation for schools peculiarly agricultural, are laying the requisite foundation for more advanced education. While we admit the utility of lectures and of farmers' clubs in the dissemination of knowledge among those who are already farmers, and therefore full-grown men, we conceive that they furnish no substitute for schools for the training of boys and youth.

Lectures upon science or art may amuse a general audience; but only they who have prepared their minds by previous training, can profit much by knowledge in so condensed a form. Farmers, as we now find them, even in Massachusetts, have not had the discipline to enable them to apprehend by a mere statement, the principles of chemistry, of geology, of physiology, or even the processes of subsoiling, drainage, and the like, which may be made very easy to a lad of eighteen, by a regular course of instruction. In agriculture, as in other studies, we must educate in youth; and farmers' clubs, however useful, must be limited rather to the diffusion of the knowledge of facts than of principles. Both lectures and farmers' clubs are modes of *instruction* rather than of *education*, if we may take the distinction indicated by the derivation of the words, methods of pouring out knowledge upon those not well prepared for its reception, rather than of deducing it from principles which are fixed landmarks in the mind.

We see no agency yet in operation which can reach the class whom we have in view. Our aim is to meet the present want of the community, to give aid to a numerous existing class of young men, who desire more knowledge of their business of agriculture, and know not how to obtain it. There are two obstacles in the way of grand agricultural colleges, which have been met, it is believed, in every attempt at their establishment thus far in this country. First, the want of competent teachers. Secondly, the want of pupils. There are few scholars with special qualifications to take charge of agricultural professorships, and few young men ready to devote their lives to a long and expensive course of study looking exclusively to agricultural life.

There are many young men, of good general education, who wish to learn thoroughly the art, with profit, who have no means of advancement in the knowledge of their peculiar business. How can we teach them the best methods of managing their farms? The true answer is, by showing them the best methods of cultivation, and teaching them to perform with their own hands the processes connected with them—by making them thoroughly acquainted with the best farm implements, the best farm buildings, the different breeds of live stock, and their various qualities, by teaching them system and habits of careful observation, and by making them understand the *reasons* of things, or the *principles and science of husbandry.*"—*Essay in Transactions of Mass. Ag. Society.*

A NEW SOCIETY.

A new Society, called "*The Needham Horticultural Society,*" has recently been formed in that town. Its objects, as stated in its Constitution, "shall be the promotion of Horticulture, and incidentally, Agriculture, Floriculture and general improvements. Its plan of action shall be by meetings, discussions, lectures, correspondence, exhibitions, premiums, prizes, planting of trees, gathering of statistics, and making record of important local events."

The Society has been organized by the choice of the following gentlemen as officers:

President—Hon. E. K. Whitaker.
Vice Presidents—C. E. Keith, Rev. A. Harvey, Galen Orr, W. M. Stedman, W. N. Eayrs, Jona. Avery, J. M. Colcord, E P. Hollis, J. W. Shaw, Esqs.
Treasurer—Geo. Howland, Esq.
Secretary—H. N. Bacheller, Esq.
Standing Committee—G. W. Palmer, J. M. Harris, O. E Bowen, A. Eaton, John Minchin, C. H. Dewing, M. Newell, M S. Scudder, Chas. Blaisdell, Esqs.

For the New England Farmer.

THE CATTLE DISEASE.

BY JUDGE FRENCH.

We have somewhat to say to the farmers of the country on this topic. Travelling daily as we do in the cars, reading all that is published on the subject, and watching with careful interest the evidence presented to the legislative committees, we have good opportunity for gaining information, whatever use we may make of our privileges. It requires some equanimity to hear with serenity the stupidity of a portion of the community, who ought either to inform themselves, or hold their peace on this vital question. Stupidity is undoubtedly the unpardonable sin. A lively, wide-awake, progressive sinner, we have some hope of; but a dogged, mulish, thick-hided old fogy, who rolls himself up in a heap, like a porcupine, shuts his eyes, and sticks out his quills in all directions, deserves such treatment as John Quincy Adams advocated for the Chinese: a little smell of fire and gunpowder, or one of its ingredients, to bring him into sympathy with the breathing, moving world.

Grave and respectable old physicians at the State House, and elsewhere, suggest doubts of the contagious nature of this disease, and question whether there is any necessity for killing, or even isolating the diseased cattle; and editors of political papers, who are anxious for occasion for complaint against somebody who is in public service, echo the idea, and howl their jeremiads over the graves of the slaughtered. Then the cry is taken up by small politicians and second-rate doctors in the small villages where the disease has not appeared, and knotty questions of constitutional law, and knottier questions of the constitutions of cows and oxen, are gravely discussed, and sage doubts are suggested of the wisdom of the course of the Commissioners and the Legislature.

"There is not sufficient evidence," say the grave doctors, "that the disease is of a contagious, or infectious character," and so there should be no commissioners with power to interfere with the cattle of our citizens. "And besides," says a friend at hand, by way of helping along the opposition, "I believe these Commissioners spread the disease themselves, by carrying it in their clothes."

"What need is there of the State interfering?" asks another; "the farmers can take care of their own business as well as traders and mechanics; they will be sharp enough to keep the disease from spreading, without any help." "And what right," chimes in a third, "has anybody to mark my cattle with a hot iron, so as to spoil my sale of them in the market?"

A large class who are far enough from the disease to be safe, are surprised that the whole country is so excited about a disease that is not known to be contagious, and from which more than half the cattle would recover, under judicious treatment, either by putting them into warm stables, with good keeping, so as to enable them to resist consumptive tendencies, or by keeping them in open, well-ventilated, old-fashioned barns, "on low diet;" they don't exactly agree which. One philosopher suggests, in a daily paper, that the disease probably is induced by the cattle feeding on grass raised with those disgusting manures from slaughter-houses, and the like; but he fails to give us any cologne or rose-water substitute for these disagreeable substances.

Now, what are the facts as to the contagious nature of this disease? If any reliance can be placed on human testimony, every case reported in Massachusetts can be traced to actual contact or actual association with animals known to be diseased, and can be traced step by step back to the cow imported from Holland by Mr. Chenery.

A little more than a hundred years ago, the disease was imported into England from Holland, and in six months 30,000 cattle died of it in Cheshire County, and more than 40,000 in Nottinghamshire. Parliament treated it as a contagious disease, and paid out nearly $500,000 in a single year, to compensate for cattle killed under its authority. During that year 80,000 head of cattle were killed in England as infected, and twice that number died of the disease, and by such energetic means the malady was finally eradicated. In Africa, according to the interesting account by Rev. Mr. Lindley, the same disease has been raging now for several years, and is only stayed by the entire isolation of the sound districts. It is there known and treated as contagious.

In 1857, 140,000 head of cattle were slaughtered or died in only forty-three villages in Holland, and there too the disease is regarded as contagious. Regarding the disease as contagious and alarming, the Governor of Massachusetts has specially convened the Legislature to adopt measures to check its progress, the Commissioners have unanimously recommended measures for meeting the disease as contagious, and the joint committee of the two houses has, after the fullest investigation, reported bills in conformity with this view. These bills, with slight amendments, will doubtless become the law of the State, before these words are published. The States of Ohio, of Maine, and of Connecticut, have each sent Commissioners to this Commonwealth to learn of the disease, and of the best modes of prevention or remedy; and the Legislature of New Hampshire has invited a distinguished member

of the Massachusetts commission, Dr. Loring, to address them on the subject.

What now is the duty of good citizens in this matter? It surely is to give every aid in their power to the execution of the laws just enacted. A man who, with the evidence now before the public, will contend that this disease is not to be met and treated as contagious, ought to be shut up in quarantine till he recovers from so dangerous a heresy. We believe that the Governor acted wisely in convening the Legislature, for in no other way could knowledge on this subject be so well collected or disseminated, as by a thorough public investigation, a publication of the evidence in ten thousand copies, as has been ordered, and the return of the members to their rural homes, with full knowledge of the nature of the disease, and of the measures adopted to limit and exterminate it. The Legislature has done itself honor by the course adopted, which has been marked with energy and unanimity in all that is essential. On the important points as to whether more or less power should be conferred on the Commissioners, or how appraisals should be made of animals or other property taken for the public good, lively debates have sprung up, but upon the expediency of adopting the most stringent and energetic measures to exterminate this terrible scourge from the Commonwealth, there has appeared to be great unanimity.

In the present state of public sentiment no person will purchase, either for breeding purposes, or for beef, or for the dairy, and no farmer will take as a gift, any animal from an infected herd. What, then, is the value of such a herd? What can be done with it? Let those answer who complain of the course that has been adopted in Massachusetts.

Walking Horses.—A correspondent of the *Country Gentleman* suggests the offering of premiums at annual county fairs, for fast walking, as well as fast trotting horses. He says he knew a man who kept from two to four teams at work on the road, and never allowed them to trot at all; yet he made the distance in quicker time than his neighbors who made their horses trot at every convenient place. He said that when a horse walked after trotting, he walked much slower than his common gait, if kept continually on the walk, and thus lost more than he gained by trotting.

Curious Effects of Camomile.—A decoction of the leaves of common camomile will destroy all species of insects, and nothing contributes so much to the health of a garden as a number of camomile plants dispersed through it. No greenhouse or hothouse should ever be without it, in a green or dried state; either the stalks or the flowers will answer. It is a singular fact, that if a plant is drooping and apparently dying, in nine cases out of ten, it will recover, if you plant camomile near it.

YOUTH'S DEPARTMENT.

THE POWER OF READING.

Benjamin Franklin tells us, in one of his letters, that when he was a boy, a little book fell into his hands, entitled Essays to do Good, by Cotton Mather. It was tattered and torn, and several leaves were missing. "But the remainder," he says, "gave me such a turn of thinking as to have an influence on my conduct through life; for I have always set a greater value on the character of a doer of good than any other kind of reputation; and if I have been a useful citizen, the public owes all the advantages of it to the little book." Jeremy Bentham mentions that the current of his thoughts and studies was directed for life by a single phrase that caught his eye at the end of a pamphlet, "The greatest good of the greatest number." There are single sentences in the New Testament that have awakened to spiritual life hundreds of millions of dormant souls. In things of less moment reading has a wondrous power. Geo. Law, a boy on his father's farm, met an old unknown book, which told the story of a farmer's son, who went away to seek his fortune, and came home after many years' absence, a rich man, and gave great sums to all his relations. From that moment George was uneasy, till he set out on his travels to imitate the adventurer. He lived over again the life he had read of, and actually did return a millionaire, and paid all his father's debts. Robinson Crusoe has sent to sea more sailors than the press gang. The story about little George Washington telling the truth about the hatchet and the plum tree has made many a truth-teller. We owe all the Waverly Novels to Scott's early reading of the old traditions and legends; and the whole body of pastoral fiction came from Addison's Sketches of Sir Roger DeCoverley, in the *Spectator*. But illustrations are numberless. Tremble ye who write, and ye who publish writing. A pamphlet has precipitated a revolution. A paragraph may quench or kindle the celestial spark in a human soul—in myriads of souls.

WHERE ALL THE TOYS COME FROM.

The vast majority are made at Grunhainscher, in Saxony. The glass comes from Bohemia. The bottles and cups are so fragile, that the poor workman has to labor in a confined and vitiated atmosphere, which cuts him off at 35 years of age. All articles that contain any metal are the produce of Nuremburg and the surrounding district. This old city has always been one of the chief centres of German metal-work. The workers in gold and silver of the place have long been famous, and their iron-work unique. This specialty has now descended to toys. Here all toy printing-presses, with their types, are manufactured; magic lanterns; magnetic toys, such as ducks and fish, that are attracted by the magnet; mechanical toys, such as running mice, and conjuring tricks, also come from Nuremburg. The old city is pre-eminent in all kinds of toy diablerie. Here science puts on the conjurer's jacket, and we have a manifestation of the Germanesque spirit of which their Albert Durer was the embodiment. The more solid articles which attract boy-

hood, such as boxes of bricks, buildings, &c., of plain wood, come from Grunhainscher, in Saxony. —*Once a Week.*

A HARD-HEARTED SCHOOLMASTER.—A German magazine recently announced the death of a school-master in Suabia, who for fifty-one years had superintended a large institution, with old-fashioned severity. From an average inferred by means of recorded observations, one of the ushers had calculated that, in the course of his exertions, he had given 911,500 canings, 124,000 floggings, 209,000 custodes, 136,000 tips with the ruler, 10,200 boxes on the ear, and 22,700 tasks by heart. It was further calculated that he had made 700 boys stand on peas, 6000 kneel on the sharp edge of wood, 5000 wear the fool's cap, and 1700 hold the rod. How vast (exclaims the journalist) the quantity of human misery inflicted by a single perverse teacher!

LADIES' DEPARTMENT.

A GOOD-NIGHT.

Sleep sound, dear love! Though the winds be high
And the dark clouds drift through the troubled sky;
Though the rising waters foam and roar,
And mournfully howl round the tortured shore;
Ill sounds from thy slumbers be far away,
And soft be thy dreams as a summer's day.

Sleep sound! Though the world be weary with fears,
And eyes that love thee be sad with tears,
Yet never a sorrow break thy rest,
And never a pang shoot through thy breast;
No shadows pass o'er thy closed eyes,
But their visions be visions of Paradise.

Sleep sound, sweet love! Till the morning's light
Lead up a new day with its fresh delight;
Till the welcome sun, as it mounts above,
Recall thee to duty, and peace, and love,
To a calm existence, untouched by strife,
And the quiet round of a holy life!

Frazer's Magazine.

ALARMING INCREASE OF CELIBACY.

This is getting to be an alarming fact to the political economists, and, in an article on the subject, *Once a Week* thus remarks:

The probabilities of marriage of a maiden at twenty are slightly superior to those of a bachelor, and incomparably greater than those of a widow of the same age; but with the lapse of years the ratios change, the probabilities of marriage at thirty-five being, for a bachelor, one to twenty-seven; for a spinster, one to thirty-five; and for a widow, one to five—the attractions of the widow standing to those of the spinster in the surprising relation of five to one—or, perchance, that number mystically representing her comparative readiness to matrimony. Thus the chance of finding happiness and a home diminishes with years.

The growing disposition to celibacy among the young men of this class, though in some measure attributable to selfish and luxurious cynicism, is chiefly due to the irrational expenditure consequent on marriage, and the unattractiveness of prospective association with women so unlikely, from their artificial habits, to yield domestic happiness. If this celibacy frequently defeats the economical consideration deciding to it, (as it should,) and ends in much immorality and unhappiness among men, how immeasurably evil must be its influence on the other sex; and what a violation of natural law must that social organization be, which so harshly represses the affections, and bereaves so large a class of the support and sympathy they are entitled to from man. Is the Rajapoot pride that slays a female infant, lest in after life it should dishonor its parentage by a plebeian marriage, more cruel than the selfish social system that devotes it to a solitary and weary life of penury and regrets?

TO KEEP MOTHS FROM CLOTHES.

Nothing moths dislike so much as being disturbed. The clothes, &c., should therefore be taken out of the linen bag, (a pillow-case tied or sewed at the open end is the best,) and well shaken once a month. A bag of clothes left unshaken is like an undisturbed fox covert, where there are plenty of rabbits, to a fox. He won't go away till he is forced to decamp, by being hunted up. Moths can't bear tallow, and if curtains, &c., are put away for any time, I should recommend a pound of the commonest tallow candles to be put in paper, and placed in with them. In the museum of the Jardin des Plantes, at Paris, they told me they used benzoin collas to keep the moths out of the skins of the animals, and not a trace of a moth did I see in their miles of galleries of stuffed beasts. The other day, I was asked what to do with a Crimean sheep-skin coat that had got the moth in it. I had it well shaken, and then benzoin collas rubbed in. It is not the moth that flies about that does the harm to the clothes, so much as the grub from which the moth comes—a white little creature with a red head. I collected several of these grubs from the Crimean coat, and having moistened the palm of the hand with benzoin collas, I put the grubs on it. They began to twist and turn about, and were dead in a second or two. I should therefore recommend benzoin collas to destroy moth grubs when present, and also to keep them away. I have read somewhere, (but I can't recollect where) that cyanide of potassium was fatal to moths, and that they won't go near it. It would be worth trying this; and I imagine the best form to use it, would be to buy some of the soap that photographers use to clean the nitrate of silver stains from their hands, and place it along with the clothes. But, after all, frequent shakings are the best antidotes for moths and their grubs.—*Cor. of London Field.*

WIFE.—This good old Saxon word (*wif,*) is, after all, the dearest and most sacred word in the whole vocabulary of love. Around it clusters all that is most beautiful, chaste and permanent in the tender passion. Into whatever forbidden paths the heart of man may wander, still it must return at last, to the hallowed name of *wife* for consolation and rest. Any other relation between the sexes, however alluring to the imagination, invariably ends in wretchedness, in shame and degradation.